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This report describes eight data-based information systems that are related to Navy requirements planning. Each system is described in terms of its background, purpose, resident computer, major data files, limitations, and future developments. Record formats and samples of files are provided. Also, system characteristics are summarized in a reference table.

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A SURVEY OF DATA-BASE INFORMATION SYSTEMS RELEVANT TO NAVY REQUIREMENTS PLANNING

NAVY PERSONNEL RESEARCH
AND
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San Diego, California 92152

NPRDC Technical Note 83-4 February 1983

A SURVEY OF DATA-BASED INFORMATION SYSTEMS RELEVANT TO NAVY REQUIREMENTS PLANNING

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FOREWORD

This effort was conducted in support of project 62763N (Personnel and Training Technology), task area RF63-521-804-031 (Career Occupational Design), work unit 03.06 (Career Management Planning (CAMP)). The overall objective of this work unit is to develop career management models that will allow the Navy to attain specific force configurations while balancing goals of cost and performance. An initial step in this effort is an in-depth assessment of existing Navy manpower and personnel information systems.

This report describes eight systems related to requirements planning that could provide data useful for conducting the CAMP effort. Descriptions are in terms of background, purpose, sample reports, description of major data files, limitations of data, and future developments. Descriptions of the major data files include record formats and samples of files.

Appreciation is expressed to the following:

- Mr. Kenneth Gay, Navy Military Personnel Command (NMPC 164), for providing information relating to the enlisted survival tracking file (STF).

- Dr. John Pass and Mr. Robert Chatfield, Navy Occupational Development and Analysis Center, for assistance in obtaining information concerning the Navy's comprehensive occupational data analysis programs (CODAP).

- Mr. Milan Miller, Naval Health Research Center, for providing documentation of the enlisted history file (EHF).

- Mr. Rex Brouillard and Mr. Paul Amyot, Navy Accounting and Finance Center (NAFC 64), for providing information regarding the Navy cost information system/five year defense plan subsystem (NCIS/FYDP).

- Mr. William Levander, Navy Regional Data Automation Center, for providing assistance in detailing the NCIS/FYDP.

- Mr. William Gerade and Mr. Kenneth Lobenstein, Chief of Naval Operations (OP-122E and OP-11G), for providing information on the Navy manpower planning system (NAMPS).

- DPCS Hector Ruiz, NMPC (472B), for providing information on the enlisted distribution projection system/unclassified billets body file (EDPROJ/UBIBO).

- Mr. Dan Lowe and Mr. Frank Almer, Navy Manpower and Material Analysis Center, Atlantic, for aiding in the development of the Navy manpower requirements system (NMRS) and the Navy manpower requirements data base (NMRDB) sections of this document.

- Mrs. Audrey Clements, CDR Thomas Loosbrock, and CDR Richard Sadlier, Navy Manpower and Material Analysis Center, Pacific, for providing information pertinent to NMRS.

Many of the individuals identified above also reviewed sections of this report. Their cooperation is gratefully appreciated.

This report is intended to assist researchers in selecting the appropriate data sources for the CAMP effort. Also, it serves as a ready source of information for manpower planners in OP-01 and other organizations.

JAMES F. KELLY, JR.
Commanding Officer

JAMES W. TWEEDDALE
Technical Director

CONTENTS

INTRODUCTION

Problem

The purpose of the career management planning (CAMP) effort is to develop career management models that will allow the Navy to attain specific force configurations while balancing goals of cost and performance. If this effort is to be successful, it is extremely important that appropriate data sources be selected. The Navy currently maintains more than 100 data-based manpower and personnel information systems. Some of these systems are redundant while others include subtle differences. An understanding of the data bases and their limitations is required.

Purpose

The purpose of this effort was to investigate the following data-based information systems, which could potentially provide the data required for conducting the CAMP research effort:

1. Enlisted survival tracking file (STF).

2. Comprehensive occupational data analysis programs (CODAP).

3. Enlisted history file (EHF).

4. Navy cost information system/five-year defense program subsystem (NCIS/-FYDP).

5. Navy manpower planning system (NAMPS).

6. Enlisted distribution projection system/unclassified billets body file (EDPROJ/-UBIBO).

7. Navy manpower requirements system (NMRS).

8. Navy manpower requirements data base (NMRDB).

The Navy resource model was not included because it was not used during the period between 1979 and 1981. Information on this model, which is expected to be reintroduced in FY82, is available upon request from the Chief of Naval Operations (OP-901).

APPROACH

1. All available pertinent documentation on the candidate systems was collected and reviewed.

2. Discussions were held with system managers, developers, users, and others to clarify details and obtain previously undocumented information.

3. Samples of system-generated reports, data base formats, and dumps included in descriptions of each system were obtained.

4. A detailed description of each system was developed for review by the system manager or other knowledgeable individuals.

5. Individual system descriptions were integrated into the final report.

RESULTS

1. The eight information systems are described in Appendices A through H in terms of their background, purpose/application, system description, manager/contacts, resident computer, data (reports and files), classification, update frequency, limitations/problems, and developmental plans. The description of the major computer files include formats and sample dumps.

2. Appendix I provides a summary of major characteristics and points of contact for each information system.

RECOMMENDATION

Documentation of individual Navy data bases and information systems should be updated periodically (by the appropriate organization).

OBSERVATIONS

1. Short courses on major Navy information systems, offered periodically, would be very beneficial to researchers, manpower planners, and others.

2. A one-page description of each Navy system, such as the documentation that was prepared by the Decision Support System (DSS) Division for the Deputy CNO (M,P&T) (DSS, 1980) would be very helpful. The DSS documentation includes manpower, personnel, and training systems. If this type of documentation were expanded to include all Navy computer systems (e.g., those relating to finance, health, medical, ship, and aircraft) researchers and others could quickly obtain basic information.

3. The Navy currently maintains a number of related requirements/authorization information systems and data bases that interact with each other. Most of these systems reside on different computers, which unnecessarily complicates the transfer of data and user operation. Current plans are to form the manpower claimant access system (MANCLASS) by linking together the Navy manpower data accounting system (NMDAS), NMRS, NMRDB, NAMPS, and resource inquiry system (RIS). The integration of these systems should facilitate report generation, improve claimant access to data, and simplify data transfers. It has not yet been decided whether or not all systems will reside on the same computer.

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Note. DSS (1980) cited in text; remainder of references cited in the appendices.

APPENDIX A

ENLISTED SURVIVAL TRACKING FILE (STF)

ENLISTED SURVIVAL TRACKING FILE (STF)

1. Background. The enlisted survival tracking file (STF) is a longitudinal data base that was developed jointly in 1977 by the Navy Military Personnel Command (NMPC 164) and the Navy Personnel Research and Development Center (NAVPERSRANDCEN). STF contains chronological records that represent the status of each individual in the enlisted force at quarterly intervals, beginning with the end of the fourth quarter of Fiscal Year 1977. The data used to construct STF is derived from end-of-quarter enlisted master record (EMR) files and the quarterly audit-trail file.

2. Purpose/Applications. The purposes of STF are to (a) serve the needs of Navy enlisted loss and strength planners (OP-135), (b) satisfy the design requirements of new manpower programming systems (OP-120/DSS), and (c) provide data necessary for the analysis of enlisted cohort continuance behavior.

STF is used by the following projects: (a) the survival probability system, (b) the structured accession planning system, (c) retention planning models, and (d) manpower utilization. The first project listed is controlled by the Chief of Naval Operations (OP-135); and the latter three, by NAVPERSRANDCEN.

3. System Description. STF is constructed from the end of the quarter EMR file and the quarterly EMR audit-trail file, which are both prepared by NMPC-165. Gay and Borack (1981, 1982) provide a description of the four computer programs and a flow chart illustrating the update processing. Update processing routines are written in COBOL. Minimal error checking of input data is done to maintain a consistency with EMR tapes. The EMR tapes are a source for official Navy documentation.

4. Manager/Contacts.

a. Program Manager/Point of Contact:

Mr. Kenneth Gay
Navy Military Personnel Command (NMPC-164)
Arlington Annex, Washington, DC 20370
Autovon: 224-5648, Commercial: (202) 694-5648.

b. Additional Point of Contact:

Dr. Jules Borack
Navy Personnel Research and Development Center (Code 15)
San Diego, CA 92152
Autovon: 933-2373, Commercial: (619) 225-2373.

5. Resident Computer. STF update processing is done on IBM computers (3033 or 370/195) located at the Argonne National Laboratory, Chicago, Illinois. STF files are stored on tapes at this facility.

6. Data.

a. Reports. The only STF reports that exist are generated during STF update processing. They are of value only to the individual who is running the update.

b. Files. STF consists of two primary collections of records: (1) the longitudinal survival tracking file (STF-L) and (2) the biographical survival tracking file (STF-B). In addition, two extraction files, STF-MINI-1 and STF-MINI-2, are generated from STF-L. The use of these two mini-files is recommended over STF-L because (1) most applications only require the variables contained in the mini-files and (2) data processing of the mini-files is easier and less expensive. The STF files are described below:

(1) STF-L. The STF-L file contains a sequence of fixed-length records (120 characters) that represent the status of individuals at the end of each quarter beginning with the fourth quarter of FY77. The records are ordered by (a) social security number and (b) chronologically. Table A-1 shows the data contents and format of STF-L. The variables listed in this table are described in detail by Gay and Borack (1981, 1982).

When an individual's status (with respect to certain variables) does not change from quarter to quarter, a counter (AS-of DATE COUNT) is incremented to indicate that the contents of the record apply to multiple quarters. The value of AS-of DATE COUNT indicates the total number of quarters the individual's status has remained unchanged. Table A-2 gives examples that illustrate how AS-of-Date Fiscal Year, Quarter, and Count should be interpreted in terms of an as-of calendar year, month, and day. Table A-3 is a sample dump of STF-L.

(2) STF-B. The STF-B file contains one fixed-length record (45 characters) of selected biographical data for each individual. These data are obtained from the individual's most recent end-of-quarter EMR file, except for home of record, which is obtained from the earliest end-of-quarter EMR file monitored for the individual.

Table A-4 shows the contents and format of STF-B. These variables are described in detail by Gay and Borack (1981, 1982). Table A-5 is a sample dump of STF-B.

(3) Mini-files. The two mini-files, STF-MINI-1 and STF-MINI-2, are generated annually from STF-L. The data contained in each file are identical. However, the file configuration is different to facilitate usage by specific software. The STF-MINI-1 file is intended to be used with statistical software packages (e.g., the statistical package for social scientists (SPSS) and biomedical computer programs (BMD)). The STF-MINI-2 file is intended to be used with MLISTIT (software designed by the Bureau of Naval Personnel to extract data from large sets residing on IBM computers).

The STF-MINI-1 file contains one record per individual. Currently, the record (352 characters) contains data for four fiscal years (end of FY77 to end of FY80). Characters 1-20 represent demographic variables. These are followed by sets of 83 characters of data for each fiscal year. The record size increass by 83 characters each year. Table A-6 shows the data contents and format of both mini-files. The STF-MINI-2 file contains one record (105 characters) per year per individual. Characters 1-20 are demographic data; and characters 21-105, fiscal year data. Dumps of STF-MINI-1 and STF-MINI-2 are given in Tables A-7 and A-8 respectively.

7. Data Classification. All STF files are unclassified but are covered by privacy act requirements.

8. Update Frequency. The STF-L and STF-B files are updated quarterly; and the mini-files, annually.

9. Limitations/Problems. Data contained in the STF data base are only as accurate as EMR data. Errors that exist in EMR data are transferred to STF files during update processing.

It is important that users understand that the STF file indicates an individual's status at the end of a quarter. Changes that occur during a quarter in some cases may not be captured; for example, a promotion and demotion back to the original pay grade, movement from one activity into another, and back again to the original one.

10. Future Developments. STF may be expanded to include additional variables. Additional files may also be created to be used in conjunction with STF. An unauthorized absence/desertion transaction file that can be cross-referenced with the STF may be constructed.

Table A-1

Survival Tracking File STF-L Record Format

Data Element	Length	Start
Social security number	9	1
As-of date fiscal year	2	10
Quarter	1	12
Count	2	13
Strength indicator	1	15
Sex	1	16
Race	1	17
Ethnic group	1	18
Date of birth	4	19
AFQT	2	23
Education years	2	25
Education certification	1	27
"A" school indicator*	1	28
Dependency-Primary	1	29
Term enlistment	1	30
Type enlistment	2	31
Term status	1	33
Number of enlistments	1	34
Type of acquisition	2	35
Type of program*	1	37
Rate/Special prog code	5	38
Branch/Class	2	43
RADO months	3	45
Enlisted designator	1	48
Present rate code	4	49
Present pay grade	1	53
PNEC	4	54
SNEC	4	58
ADSD	4	62
PEBD	4	66
CED	4	70
CADD	4	74
EAOS	4	78
Soft EAOS	4	82
EAOS change indicator	1	86
Onboard actual UIC	5	87
Onboard ACC	3	92
Onboard sea/shore code	1	95
Onboard transfer date	4	96
Past actual UIC	5	100
SRB received indicator*	1	105
Zone	1	106
Skill indicator	1	107
Award level	1	108
RQC	2	109
Loss date of occurrence	4	111
Loss code Navy	3	115
Loss code DoD	3	118

LRECL = 120 BLKSIZE = 12000 RECFM = FB
Sort sequence: SNN (Major) As-Of Date (Minor)

Table A-2

As-of Fiscal Year, Quarter, Count vs. As-of Calendar Year, Month, Day

Fiscal Year	As-of Date		As-of Date		
	Quarter	Count	Year	Calendar Month	Day
77	4	1	77	09	30
78	1	1	77	12	31
78	2	1	78	03	31
78	3	1	78	06	30
79	4	1	79	09	30
78	4	2	78	09	30
			78	12	31
78	4	3	78	09	30
			78	12	31
			79	03	31
78	4	5	78	09	30
			78	12	31
			79	03	31
			79	06	30
			79	09	31
79	2	3	79	03	31
			79	06	30
			79	09	30

Table A-3

Dump of STF-1

```
N.E.R.D.C. TAPE DUMP UTILITY PROGRAM - V3.8     SERIAL=171040     UNIT=3A7    16:38:19      TUESDAY     FEBRUARY 23, 1982     PAGE 0003
                    1111111111222222222233333333334444444444555555555566666666667777777777888888888899999999990
FILE # 0001   1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

BLK#  REC#

00001 00001  111111111177401FMCY210179122 2495Z318           32025 390030000      630252127207751077127712 000221031      6      LENGTH= 32400
             67150                <-EOR
      00002  111111111178102FMCY210179122 2495Z318           32030 390030000      630252127207751078057805 000221031      6
             67150                <-EOR
      00003  111111111178301FMCY210179122 2495Z318 AZ99932035 390030000000063025212720775107809780930002210 31     6
             67150                <-EOR
      00004  111111111178402FMCY210179122 2495Z318 AZ99932041 39003000000000630252127207751079037903300022103 1     6
             67150                <-EOR
      00005  111111111179203FMCY210179122 2495Z318 AZ99932053 3900300000000063025212720775108003800330002210 31     6
             67150                <-EOR
      00006  111111111180102FMCY210179122 2495Z318 AZ99932053 39003000000000630252127207751080038003 000221031      6
             67150                <-EOR
      00007  111111111180301FMCY210179122 2495Z318 AZ99932056 390030000000006302521272077510800780079000221031      6
             67150                <-EOR
      00008  111111111180401FMCY210179122 2231Z418 AZ99932005 390030000000006302521230078007810181011000221031      6
             67150                <-EOR
      00009  111111111181101FMCY210179122 1231Z418 AZ99932006 39003000000000630252128007800781018101 900221031      6
             67150                <-EOR
      00010  111111111181201HMCY210179122 1231Z418 AZ99932005 39003000000000630252128007800781018101 000221031      6
             67150    1 8101943MBK<-EOR
      00011  222222222277401FMCY3101441011163177          11      01000000      4903490374080000800 88008 302621001      2
             00310                <-EOR
      00012  222222222278103FMCY3101441011163177          11      01000000      490349037408000080088008 602011001      2
             00310                <-EOR
      00013  222222222278401FMCY310144101 163177          11      01000000      490349037408000080088008 602011001      2
             00310                <-EOR
      00014  222222222279101HMCY3101441011163177          11      01000000      490349037408000080088008 60201100178122
             00310    2 7812932RBC<-EOR
      00015  333333333377403FMCX3104  132 343126         32045 170020000      610151107405740578057805 620631031      6
             19920                <-EOR
      00016  333333333378301HMCX3104  132 343126         32049 170020000      610151107405740578057805 62063103178056
             19920    1 7805801JBK<-EOR
      00017  444444444477403FMCY3012  123 343166          11      6500A0000958848014801741200007812781 2 093931001     0
             97350                <-EOR
      00018  444444444478301FMCY3012  123 343156          11      6500A00009588480148017412000078127812 093931001     0
             97350    2           <-EOR
      00019  444444444478401HMCY3012  123 343156          11      6500A00009588480148017412000078127812 09393100178070
             97350    2 7807932RBC<-EOR
      00020  555555555577403FMCY320992132 363166  1       11      65180A00009502530352117706000083068306 660511001     3
             93860    R1          <-EOR
      00021  555555555578309FMCY320992132 363166          11      65180A00009502530352117706000083068306 660511001     3
             93860    R1          <-EOR
      00022  555555555578201HMCY320992132 363165          11      65180A00009502530352117706000083068306 660511001     3
             93860    2 8008931NBD<-EOR
      00023  666666666677404FMCY3504701221353155          11      550015801     540854077601000081018101 551011002     3
             02870                <-EOR
      00024  666666666678401FMCY350470122 353155          11      550015801     540854077601000081018101 551011002     3
             02890                <-EOR
```

Table A-4

Survival Tracking File STF-B Record Format

Data Element	Length	Start
Social security number	9	1
Home of record	2	10
Dod-AFEES	3	12
SCREEN	3	15
Mental aptitude test ID	2	18
Mental aptitute test results	26	20
LRECL = 45 BLKSIZE = 4500 RECFM = FB Sort sequence: SSN (Major)		

Table A-5

Dump of STF-B

```
I.B.M.O.C. TAPE DUMP UTILITY PROGRAM - V3.8    SERIAL=170987    UNIT=3A7    16:43:56    TUESDAY    FEBRUARY 23, 1982    PAGE 0003
                  1111111111222222222233333333334444444444555555555566666666667777777777888888883899999999990
FILE # 0001  1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

BLK#  REC#

00001 00001  1111111111151      B955546361                                                                    LENGTH= 32400
                                  <-EOR
      00002  2222222225 51      B953395248
                                  <-EOR
      00003  3333333333 33
                                  <-EOR
      00004  4444444444 33      B948354449
                                  <-EOR
      00005  5555555555 51      B971595958                  770835157502346T7501466267045543610245O7
                                  <-EOR
      00006  6666666663 33      B964455654                  770980096502402555096080                    A
                                  <-EOR
      00007  7777777773 33      B948345538                  800402807510271R7103592854076066     1*     A
                                  <-EOR
      00008  8888888883 33      B957535853                  771150767303439267093415670640 34
                                  <-EOR
      00009  9999999900 25      B460555160                  7508774270044030
                                  <-EOR
      00010  9999999901 33
                                  <-EOR
      00011  9999999902 33      B949344043                  7311262578063669780153OP67063413670534091*
                                  <-EOR
      00012  9999999903 33      B959565154                  740948927209352170113520691245O664055205
                                  <-EOR
      00013  9999999043 33      B953345348                  770350087611472V7611501M7503501V7503500U
                                  <-EOR
      00014  9999999905 33      B955505357                  790231937708530P7611528R711034056907400 81*
                                  <-EOR
      00015  9999999906 15
                                  <-EOR
      00016  9999999907099999  B455486657                  8002325L78057742760840787001340O     1*
                                  <-EOR
      00017  9999999908 33      B955524636                  7802272V7403740863054513
                                  <-EOR
      00018  9999999409 33                                  7812541K771023997107340071063404691254051*
             0280                 <-EOR
      00019  9999999910 33A10   B956574641                  761124067512510B64113095
                                  <-EOR
      00020  9999999911 33      B964547055
                                  <-EOR
      00021  9999999912 34829                               8008340074056084                    1*     A
                                  <-EOR
      00022  9999999913 33      B961516066                  690335166401122467053521670435206311450 6
                                  <-EOR
      00023  9999999914 33      B966696647                  751297437503226575032335750234 9M7502349M
                                  <-EOR
      00024  9999999915 39      B956554456                  8007849779100 29C7705507G69073626     1*1*
                                  <-EOR
```

Table A-6

Mini-file-1 and Mini-file-2 Record Descriptions

PERSONNEL FLOW FILE DESCRIPTION				
DATA ELEMENT	LENGTH	START LOCATION		
		FILE-ONE	FILE-TWO	
SOCIAL SECURITY NUMBER	9	1	1	12. 13. 14. 15. 16. 17. 18. 19.
SEX	1	10	10	20.
RACE	1	11	11	21.
DATE OF BIRTH	4	12	12	22.
AFQT	2	16	16	23.
MENTAL-GROUP	1	18	18	24.
EDUCATION CERTIFICATION . .	1	19	19	25.
HIGH SCHOOL DEGREE GRAD . .	1	20	20	26.
FISCAL YEAR	2	---	21	27.

Table A-6 (Continued)

FIRST FISCAL YEAR				28.
AT BEGIN FY --				29.
LENGTH OF SERVICE (ADSD)	2	21	23	30.
LENGTH OF SERVICE (PEBD)	2	23	25	31.
HEAOS	4	25	27	32.
TRC (HEAOS)	1	29	31	33.
SEAOS	4	30	32	34.
TRC (SEAOS)	1	34	36	35.
RATE CODE	4	35	37	36.
PAY GRADE	1	39	41	37.
NUMBER OF ENLISTMENTS	1	40	42	38.
TERM STATUS	1	41	43	39.
AT END FY --				40.
HEAOS	4	42	44	41.
SEAOS	4	46	48	42.
RATE CODE	4	50	52	43.
PAY GRADE	1	54	56	44.
NUMBER OF ENLISTMENTS	1	55	57	45.
TERM STATUS	1	56	58	46.
DURING FY				47.
STATUS-BEGIN	1	57	59	48.
STATUS-END	1	58	60	49.
TERM STATUS CHANGE	1	59	61	50.
BR-CL CHANGE	1	60	62	51.
NUM OF ENLISTMENTS CHANGE	1	61	63	52.
RATE CODE CHANGE	1	62	64	53.
PAY GRADE CHANGE	1	63	65	54.
LOSS INFORMATION				55.
1ST QTR LOSS OCCUR DATE	4	64	66	56.
1ST QTR NAVY LOSS CODE	3	68	70	57.
1ST QTR DOD LOSS CODE	3	71	73	58.
2ND QTR LOSS OCCUR DATE	4	74	76	59.
2ND QTR NAVY LOSS CODE	3	78	80	60.
2ND QTR DOD LOSS CODE	3	81	83	61.
3RD QTR LOSS OCCUR DATE	4	84	86	62.
3RD QTR NAVY LOSS CODE	3	88	90	63.
3RD QTR DOD LOSS CODE	3	91	93	64.
4TH QTR LOSS OCCUR DATE	4	94	96	65.
4TH QTR NAVY LOSS CODE	3	98	100	66.
4TH QTR DOD LOSS CODE	3	101	103	67.

Table A-6 (Continued)

SECOND FISCAL YEAR				68.
AT BEGIN FY --				69.
LENGTH OF SERVICE (ADSD) .	2	104	---	70.
LENGTH OF SERVICE (PEBD) .	2	106	---	71.
HEAOS	4	108	---	72.
TRC (HEAOS)	1	112	---	73.
SEAOS	4	113	---	74.
TRC (SEAOS)	1	117	---	75.
RATE CODE	4	118	---	76.
PAY GRADE	1	122	---	77.
NUMBER OF ENLISTMENTS . .	1	123	---	78.
TERM STATUS	1	124	---	79.
AT END FY --				80.
HEAOS	4	125	---	81.
SEAOS	4	129	---	82.
RATE CODE	4	133	---	83.
PAY GRADE	1	137	---	84.
NUMBER OF ENLISTMENTS . .	1	138	---	85.
TERM STATUS	1	139	---	86.
DURING FY			---	87.
STATUS-BEGIN	1	140	---	88.
STATUS-END	1	141	---	89.
TERM STATUS CHANGE	1	142	---	90.
BR-CL CHANGE	1	143	---	91.
NUM OF ENLISTMENTS CHANGE	1	144	---	92.
RATE CODE CHANGE	1	145	---	93.
PAY GRADE CHANGE	1	146	---	94.
LOSS INFORMATION			---	95.
1ST QTR LOSS OCCUR DATE .	4	147	---	96.
1ST QTR NAVY LOSS CODE . .	3	151	---	97.
1ST QTR DOD LOSS CODE . .	3	154	---	98.
2ND QTR LOSS OCCUR DATE .	4	157	---	99.
2ND QTR NAVY LOSS CODE . .	3	161	---	100.
2ND QTR DOD LOSS CODE . .	3	164	---	101.
3RD QTR LOSS OCCUR DATE .	4	167	---	102.
3RD QTR NAVY LOSS CODE . .	3	171	---	103.
3RD QTR DOD LOSS CODE . .	3	174	---	104.
4TH QTR LOSS OCCUR DATE .	4	177	---	105.
4TH QTR NAVY LOSS CODE . .	3	181	---	106.
4TH QTR DOD LOSS CODE . .	3	184	---	107.

Table A-6 (Continued)

THIRD FISCAL YEAR				108.
AT BEGIN FY --				109.
LENGTH OF SERVICE (ADSD) .	2	187	---	110.
LENGTH OF SERVICE (PERD) .	2	189	---	111.
HEAOS	4	191	---	112.
TRC (HEAOS)	1	195	---	113.
SEAOS	4	196	---	114.
TRC (SEAOS)	1	200	---	115.
RATE CODE	4	201	---	116.
PAY GRADE	1	205	---	117.
NUMBER OF ENLISTMENTS . .	1	206	---	118.
TERM STATUS	1	207	---	119.
AT END FY --				120.
HEAOS	4	208	---	121.
SEAOS	4	212	---	122.
RATE CODE	4	216	---	123.
PAY GRADE	1	220	---	124.
NUMBER OF ENLISTMENTS . .	1	221	---	125.
TERM STATUS	1	222	---	126.
DURING FY			---	127.
STATUS-BEGIN	1	223	---	128.
STATUS-END	1	224	---	129.
TERM STATUS CHANGE	1	225	---	130.
BR-CL CHANGE	1	226	---	131.
NUM OF ENLISTMENTS CHANGE	1	227	---	132.
RATE CODE CHANGE	1	228	---	133.
PAY GRADE CHANGE	1	229	---	134.
LOSS INFORMATION			---	135.
1ST QTR LOSS OCCUR DATE .	4	230	---	136.
1ST QTR NAVY LOSS CODE . .	3	234	---	137.
1ST QTR DOD LOSS CODE . .	3	237	---	138.
2ND QTR LOSS OCCUR DATE .	4	240	---	139.
2ND QTR NAVY LOSS CODE . .	3	244	---	140.
2ND QTR DOD LOSS CODE . .	3	247	---	141.
3RD QTR LOSS OCCUR DATE .	4	250	---	142.
3RD QTR NAVY LOSS CODE . .	3	254	---	143.
3RD QTR DOD LOSS CODE . .	3	257	---	144.
4TH QTR LOSS OCCUR DATE .	4	260	---	145.
4TH QTR NAVY LOSS CODE . .	3	264	---	146.
4TH QTR DOD LOSS CODE . .	3	267	---	147.

Table A-6 (Continued)

FOURTH FISCAL YEAR				148.
AT BEGIN FY --				149.
LENGTH OF SERVICE (ADSD) .	2	270	---	150.
LENGTH OF SERVICE (PEBD) .	2	272	---	151.
HEAOS	4	274	---	152.
TRC (HEAOS)	1	278	---	153.
SEAOS	4	279	---	154.
TRC (SEAOS)	1	283	---	155.
RATE CODE	4	284	---	156.
PAY GRADE	1	288	---	157.
NUMBER OF ENLISTMENTS . .	1	289	---	158.
TERM STATUS	1	290	---	159.
AT END FY --				160.
HEAOS	4	291	---	161.
SEAOS	4	295	---	162.
RATE CODE	4	299	---	163.
PAY GRADE	1	303	---	164.
NUMBER OF ENLISTMENTS . .	1	304	---	165.
TERM STATUS	1	305	---	166.
DURING FY			---	167.
STATUS-BEGIN	1	306	---	168.
STATUS-END	1	307	---	169.
TERM STATUS CHANGE	1	308	---	170.
BR-CL CHANGE	1	309	---	171.
NUM OF ENLISTMENTS CHANGE	1	310	---	172.
RATE CODE CHANGE	1	311	---	173.
PAY GRADE CHANGE	1	312	---	174.
LOSS INFORMATION			---	175.
1ST QTR LOSS OCCUR DATE .	4	313	---	176.
1ST QTR NAVY LOSS CODE . .	3	317	---	177.
1ST QTR DOD LOSS CODE . .	3	320	---	178.
2ND QTR LOSS OCCUR DATE .	4	323	---	179.
2ND QTR NAVY LOSS CODE . .	3	327	---	180.
2ND QTR DOD LOSS CODE . .	3	330	---	181.
3RD QTR LOSS OCCUR DATE .	4	333	---	182.
3RD QTR NAVY LOSS CODE . .	3	337	---	183.
3RD QTR DOD LOSS CODE . .	3	340	---	184.
4TH QTR LOSS OCCUR DATE .	4	343	---	185.
4TH QTR NAVY LOSS CODE . .	3	347	---	186.
4TH QTR DOD LOSS CODE . .	3	350	---	187.

Table A-6 (Continued)

DATA ELEMENT CODE STRUCTURE		188.
		189.
		190.
ALL DATA ELEMENTS, EXCEPT FOR THE FOLLOWING EXCEPTIONS,		191.
ARE TAKEN FROM THE EMR VIA THE STF AND HAVE THE SAME		192.
CODE STRUCTURES AS ON THOSE FILES. THE EXCEPTIONS ARE		193.
THE FOLLOWING--		194.
		195.
HIGH SCHOOL DEGREE GRAD	1 = YES	196.
	2 = GED	197.
	3 = NONE	198.
		199.
STATUS-BEGIN	1 = ONBOARD	200.
STATUS-END	2 = DESERTION STATUS	201.
	3 = NOT-ONBOARD	202.
		203.
TERM STATUS CHANGE	0 = NO CHANGE DURING FY	204.
BR-CL CHANGE	1 = CHANGED DURING FY	205.
NUM OF ENL CHANGE		206.
RATE CODE CHANGE		207.
PAY GRADE CHANGE		208.
		209.
		210.

Table A-7

Dump of Mini-file-1

```
N.E.R.D.C. TAPE DUMP UTILITY PROGRAM - V3.8     SERIAL=171359     UNIT=HAF     16:39:54     TUESDAY     FEBRUARY 23, 1982     PAGE 0003
                            1111111111222222222233333333334444444444555555555566666666667777777777888888888899999999990
FILE # 0001    1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

BLK#  REC#

00001 00001    11111111111C21017922115257712177121390033Z79037903390033Z1100000000000000000C00000000000000000000000     LENGTH= 31680
               0001626790317903139003 3Z80038003390033Z11000000000000000000000000000000000000000000C0000017278003180031
               390033Z81018101390034Z11001000000000000000000000000000000000000000000000000000000000000000000000000
               0000000000000000000000008101943MBK000000000000000000000000<-EOR
      00002    22222222221C310144413292980083800830100J77800880080100J77110000C00000000000000000000000000000000000C0
               000303080082800820100J77800880080100J7713000007312932RBC0000C000000000000000C000000000000000000000000
               0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
               00000000000000000000000000000000000000000000000000000<-EOR
      00003    33333333331C31040062117267805178051170026Z78057805170025Z1300000000000000000C0000000C7805801JBKC000000
               0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
               0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
               00000000000000000000000000000000000000000000000000000<-EOR
      00004    44444444441C301200632303078122781226500A66781278126500A66130000000000000000000CC0000000000C0C00007807932
               RBC0000000000000000000000000000000000000000000000000000000000000000000C000000000000000000000000000
               0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
               00000000000000000000000000000000000000000000000000000<-EOR
      00005    55555555551C32099222125258306683066618 0A6683068306618 0A66130000000000000000C8CC8931NBD0000000000C00000C0
               00000000000000000000000000000000000000000000000000000000000000000000000000000000000027278306483064
               6180A66830683066180A661300000000000000000000000000000000000000000000000000000000000000000000000000
               00000000000000000000000000000000000000000000000000000<-EOR
      00006    66666666661C35047022124248101481014550015581018101550015511000000000000000000000C0000000000C000000000000C0
               00025258101381013550015581018101550015511000000000000000000000000000000000000000000000026268101281012
               5500155810181015500155130000000000000000000000008003931NBD000000000000000000000000000000000000000000
               00000000000000000000000000000000000000000000000000000<-EOR
      00007    77777777771C34123343224248205582055370015582058205370015511000000000000000000CC00000000000000000C0000C0
               000252582054820543700155820582053700J55110000100000000000000000000000000000000000000000026268205382053
               3700J55820584033700J5511000000000000000000000000000000000000000000000000000000000000000000000000000
               00000000000000000000000000000000000000000000000000000<-EOR
      00008    88888888881C35097422123237804178C4115001557907790715001551100000000000000C000C00CC000000000C000000CC0
               00024247907179071150015579077907150015513000000000000C000000000000000000000007907931NBD000000000000000
               0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
               00000000000000000000000000000000000000000000000000000<-EOR
      00009    99999990 01C3903006212122810248102480 00J4481028102800 0A4411000000000000000000C000000C00000000000000000000
               000222381023810238000A448102810280 00A441100000000000000000000000000000000000000000000002324810228102 2
               8000A44810281078000A4411000000000000000000000000000000000000000000000000000000000000000000000000000
               00000000000000000000000000000000000000000000000000000<-EOR
      00010    99999990 11C3710006211719780817808115002337808780815002331300000771083 1GKC0CC000000C0000000000CC00000
               0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
               0000000000000000000000000000000000000000000000000C0000000000000000000000000000000000000000000000000
               00000000000000000000000000000000000000000000000000000<-EOR
      00011    99999990 21C3511006212424730317803105001558312831205001661110100000000000000000000C000000C000000000000C0
               0002525831268312605001668312831205001661100000000000000000000000000000000000000000000026268312583125
               0500166831283120500166130000000000000008001931NBD0000000000000000000000000000000000000000000000000
               00000000000000000000000000000000000000000000000000000<-EOR
      00012    99999990 31C370571221222383036830366600J5583038303660 0J5511000000000000000000000000000C000000000000000C0
               00023248303583035660 0J55830383036600A551100000000000000000000000000000000000C000000000024258303483034
               6600A55830383036600A551100000000000000000C0000000000000000000000000000000000000000000000000000000000
               000000000000000000000000000C0000000000000000000000000<-EOR
```

Table A-8

Dump of Mini-file-2

```
N.E.R.D.C. TAPE DUMP UTILITY PROGRAM - V3.8     SERIAL=171424     UNIT=3AD    16:41:32      TUESDAY      FEBRUARY 23, 1982      PAGE 0003
                       1111111111222222222233333333334444444444555555555566666666667777777777888888888899999999990
FILE # 0001   1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890

BLK#   REC#

00001  00001  1111111111C2101792217815257712177121390033Z79037903390033Z1100C0000000000000C00000000000000000C000000000      LENGTH= 31920
              00000<-EOR
       00002  1111111111C2101792217916267903179031390033Z80038003390033Z110000000000000000000CC00000000000000000000000
              00000<-EOR
       00003  1111111111C2101792218017278003180031390033Z8101810139003 4Z11001000000000000000000C0000000000000C0000000
              00000<-EOR
       00004  2222222221C31014441378292980083800830100J77800480060100J7711000000000000000000000000000000000000000000
              00000<-EOR
       00005  2222222221C3101444137930308008280082010 0J77300880040100J7713000007812932RBC0000000C0000000000000000000
              00000<-EOR
       00006  3333333331C3104006217817267805178051170026Z78057805170026Z1300000000000000C00800000007805801J8K00000
              00000<-EOR
       00007  4444444441C30120063278303078122781226500A66781278126500A6613000000000000000CC0000000000000000000C78079
              32RBC<-EOR
       00008  5555555551C32099222178252583066830666180A6683068306618 0A66130000000000000008008931NB0000000000000000
              00000<-EOR
       00009  5555555551C32099222180272783064830546180A66830683066180A6613000C00000000C00000000000C000000000C000
              00000<-EOR
       00010  6666666661C350470221782424810148101455001558101810155001551100000000000C00000C000C000C0000000000000
              00000<-EOR
       00011  6666666661C35047022179252581013810135500155810181015500155110000000000000000C000C0000000000000000000
              00000<-EOR
       00012  6666666661C3504702218025268101281012550015581018101550015513000000000000000000000000000C8003931NB000000
              00000<-EOR
       00013  7777777771C34123343278242482055820553700155820582053700155110000000000000000CC000000000C000000000000
              00000<-EOR
       00014  7777777771C34123343279252582054820543700155820582053700J5511000010000000000CC00000000000C00000000000000
              00000<-EOR
       00015  7777777771C34123343280262682053820533700J55820584033700J55110000000000000000C000000000000000C00000C000
              00000<-EOR
       00016  8888888881C35097422178232378041780411500155790779071500155110000000000000000000CC0000000000000000000
              00000<-EOR
       00017  8888888881C350974221792424790717907115001557907790715001551300000000000000000C00000000000000000C79079
              31NBD<-EOR
       00018  9999999001C39030062178212281024810248000J448102810280 00A441100000000000000C000000000000000000000000
              00000<-EOR
       00019  9999999001C39030062179222381023810238000A4481028102800 0A4411000000000000C0C000C00C00000000000000C0
              00000<-EOR
       00020  9999999001C3903006218023248102281022800 0A448102810780 00A441100000000000C0C00C00000000000000000000000
              00000<-EOR
       00021  9999999011C3710006217317197808178081150023373087308150023313000007710831GKCC0000C00000C000000000000
              00000<-EOR
       00022  9999999021C35110062178242478031780310500155831283120500166111010000000000000C000C00000C0000C000000
              00000<-EOR
       00023  9999999021C35110062179252583126831260500166831283120500166110000000000000C0000C0000000000000000C0C0
              00000<-EOR
       00024  9999999021C351100621802626831258312505001668312831205001661300000000000000008001931NB000000000000000
              00000<-EOR
```

APPENDIX B

COMPREHENSIVE OCCUPATIONAL DATA ANALYSIS PROGRAMS (CODAP)

COMPREHENSIVE OCCUPATIONAL DATA ANALYSIS PROGRAMS (CODAP)

1. Background. The comprehensive occupational data analysis programs (CODAP) were developed during the 1960s by the Human Resources Laboratory of the United States Air Force (AFHRL). CODAP is a general-purpose system of more than 50 computer programs that perform statistical analyses on occupational duty and task data. A duty is a set of tasks that comprise a major function (e.g., electronic maintenance); a task is a discrete item of work (e.g., adjust oscillators or measure voltage).

CODAP reads in duty and task data for groups of individuals and generates management reports that contain statistics summarizing the percent of personnel and the amount of time spent performing them. CODAP also has the capability of "clustering" people based upon the similarity of tasks or time spent on tasks. This function is useful for grouping individuals whose job content is closely related. Presently CODAP is being used by the four U.S. military services, several foreign military services, and several governmental personnel offices and universities. The Navy's version of CODAP is directed and maintained by the Navy Occupational Development and Analysis Center (NODAC).

2. Purpose/Applications. The purpose of CODAP is to provide personnel management with detailed information about jobs that individuals are performing. This information may be used in a number of ways, including (a) writing job descriptions, (2) classifying jobs, and (3) ensuring that training/educational requirements are met. The Navy is currently using CODAP to:

a. Provide the Chief of Navy Education and Training (CNET) with information for modifying courses.

b. Handle requests by the Navy Military Personnel Command (NMPC) and Chief of Naval Operations (CNO) to assess the feasibility of merging ratings or creating new ones. Currently, NODAC is being used to assist in determining the feasibility of merging the yeoman (YN) and personnelman (PN) ratings.

c. Describe Navy ratings and NECs.

d. Validate the Navy's occupational standards.

3. System Description. Under the Navy's CODAP system, individuals in each rating filling both sea and shore billets are sampled approximately every 5 years to obtain specific occupational information. These individuals in a rating are administered a task inventory booklet that is developed by NODAC and extensively reviewed by fleet and training commands. This booklet asks incumbents to estimate "how much time" they spend on tasks in their present job and to answer questions regarding training, work experiences, and equipment worked on. Booklets are updated approximately every 5 years due to changes in job content and equipment. Responses are recorded on an answer sheet and then op-scanned onto magnetic tape.

Figure B-1 presents a high-level flow diagram that illustrates how raw data is processed by the major CODAP programs (IBM version). The process begins with the magnetic tape of raw data being read into Program SETCHK, which checks for out-of-range data, nonnumeric characters, and the proper number of records, and performs other validity checks. Any unusable cases are eliminated. Next, Program INPSTD builds the history data file (HDF) tape, which serves as an input to the CODAP analyses programs, which are written in FORTRAN. The HDF contains one record for each case. The

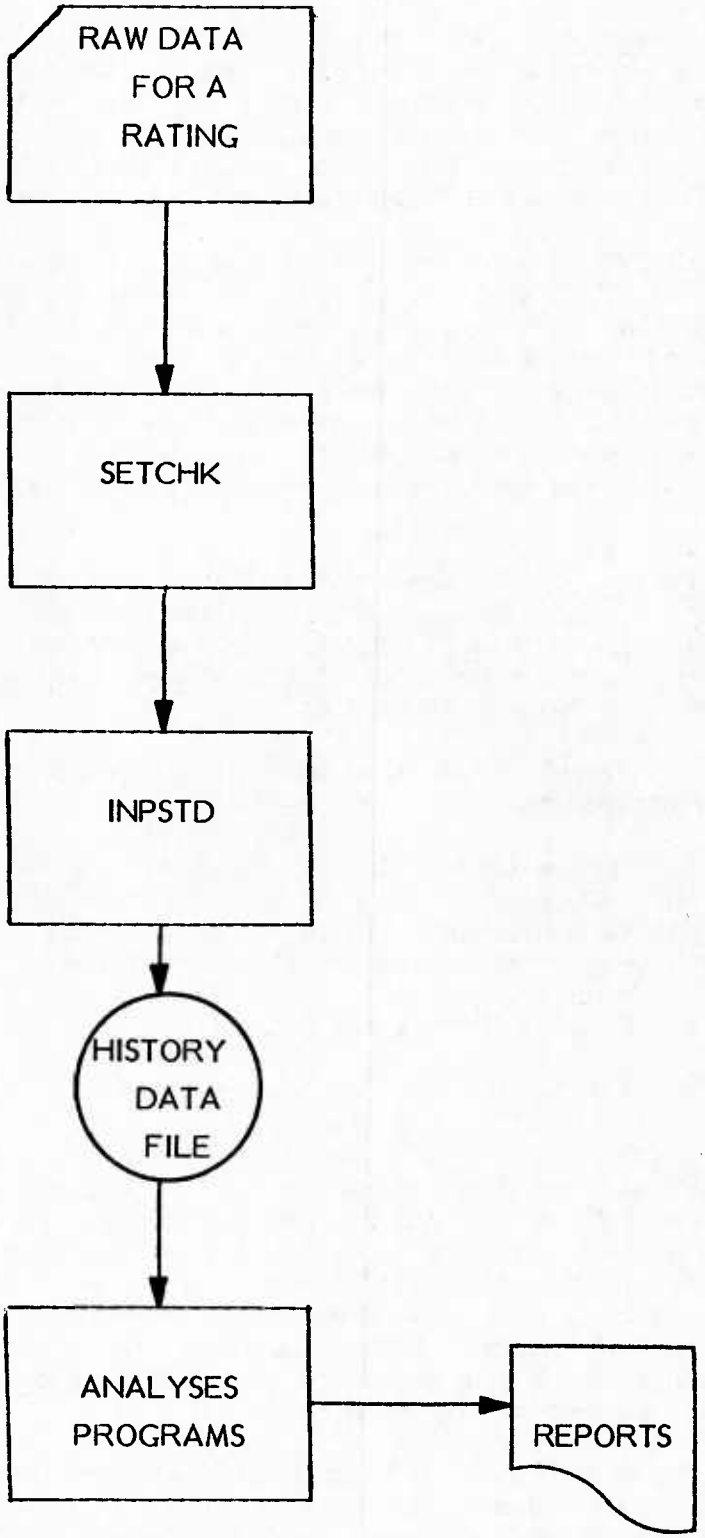


Figure B-1. High-level flow diagram of the CODAP process.

function of some of the analyses programs, plus the SETCHK and INPSTD preliminary programs, is summarized in Table B-1. Gambardella and Alvard (undated) provide an in-depth description of the analyses programs.

Table B-1

The Function of Major CODAP Programs

Programs	Function
Preliminary	
SETCHK	Edits raw data
INPSTD	Creates history data file
Analyses	
OVLGRP	Clusters individuals
PRTVAR	Generates reports of background variables
JOBDEC	Computes and prints job descriptions
GRPSUM	Summarizes job descriptions from JOBDEC
GRPDIF	Computes difference in time spent on tasks among jobs
PRITSK	Prints task report
OVLJDF	Computes similarities among job descriptions
AVALUE/VARSUM	Calculates and displays statistics on background information

4. Manager/Contacts.

a. Manager/Contact for requests (tapes of raw data cards, CODAP reports, inventory booklets, answer booklets, and raw data masks):

Officer in Charge
Navy Occupational Development and Analysis Center (NODAC)
Building 150, Washington Navy Yard (Anacostia)
Washington, DC 20374
Autovon: 288-4620, Commercial: (202) 433-4620.

b. Contact for Questions:

Technical Director
Navy Occupational Development and Analysis Center (NODAC)
Building 150, Washington Navy Yard (Anacostia)
Washington, DC 20374
Autovon: 288-4621, Commercial: (202) 433-4621.

5. Resident Computer. The CODAP system at NODAC resides on an IBM 4331-1 computer. Some CODAP processing is also done at NAVPERSRANDCEN on a UNIVAC 1182 computer. In the future, this processing will be transferred to an IBM 4331 computer.

6. Data.

a. Reports. CODAP reports contain a great deal of information. For example, Table B-2, which was generated by CODAP Program TITLES, lists the 15 duties and 235 tasks performed by the individuals surveyed in the tradevman rating. Table B-3, which was generated by Program JOBDEC, provides statistical information on the duties and tasks performed by a tradevman in pay grade E-2. Table B-3, page 1, shows that tradevmen, E-2, perform only 13 of the 15 duties. The three duties performed by the highest percentage of individuals, and which also consumed the most time, were general duty, electronic maintenance, and administration.

Pages 2 through 5 of Table B-3 list average percentages of time spent by a tradevman, E-2, performing all tasks. The tasks are ordered by percentage of members performing them.

b. Files. A number of files exist within the CODAP system. Only the raw data file, which is the most useful data source for conducting independent analyses on CODAP data, will be described in detail.[1]

The raw data file contains a unique set of variables for each rating, as well as variables that are identical for all ratings. Within a record, variables 1-45 are currently identical for all ratings. Table B-4 shows the name and format of these common variables for the tradevman rating. For this rating, a record contains a total of 840 variables. Table B-5 is a dump of the raw data record for the tradevman rating.

The description and format of the remaining variables (for tradevman or, in fact, for all ratings) can be determined from (1) the task inventory booklet for rating, (2) the answer booklet, and (3) the raw data mask for the rating (data format cards of input standards), all of which are available from NODAC.

NODAC currently has a maximum of two sets of raw data for each rating. The sets are based upon the most recent survey and its predecessor. It should be noted that variables and formats of the raw data may change from survey to survey.

7. Classification. All data and reports are unclassified.

8. Update Frequency. Approximately every 5 years, a sample of individuals within a rating are administered a task inventory booklet. At that time, new history data files and reports are generated. Task inventory booklets are updated prior to each survey.

9. Limitations/Problems. The following problems are associated with performing independent analyses on raw data:

a. Variables and formats are not constant over all ratings or over time.

b. The number of variables associated with ratings is enormous. For example, the tradevman rating is described by over 800 variables.

c. Task definitions are not standardized among surveys.

10. Developmental Plans. A new, more flexible, CODAP system is being developed by Texas A&M University. This system will allow "clustering" to be done on both people and tasks and allow easier manipulation of the data.

---

[1]The history data file is less desirable because it is unformatted, has variable length records, and is designed to be processed by CODAP programs only.

Table B-2

Duties and Tasks for Tradevman Rating (all Pay Grades)

TOO STUDY TITLES — 2TD-01A1 — TOCTITLE PAGE

TITLES FOR TDO BASIC PACKAGE

A--- ELECTRONIC MAINTENANCE

A 1 VISUALLY INSPECT ELECTRONIC EQUIPMENT FOR DEFECTS
A 2 VISUALLY INSPECT ELECTRONIC COMPONENTS FOR DEFECTS
A 3 TEST CIRCUITS FOR PROPER PHASE SEQUENCE
A 4 MEASURE VOLTAGE
A 5 MEASURE CURRENT
A 6 MEASURE RESISTANCE
A 7 MEASURE CAPACITANCE
A 8 MEASURE FREQUENCY
A 9 MEASURE FREQUENCY (RF) POWER OUTPUT
A 10 PERFORM CONTINUITY CHECKS
A 11 ADJUST LOW VOLTAGE POWER SUPPLIES
A 12 ADJUST HIGH VOLTAGE POWER SUPPLIES
A 13 ADJUST SYNCHROS/RESOLVERS
A 14 ADJUST SERVO AMPLIFIERS (FEEDBACK/GAIN)
A 15 ADJUST POTENTIOMETERS
A 16 ADJUST/ALIGN SCOPES (RADAR, ECM, ETC.)
A 17 ADJUST TRANSMITTER FREQUENCY
A 19 ADJUST OSCILLATORS
A 19 SIGNAL TRACE EQUIPMENT
A 20 PRE-SET FREQUENCIES ON MULTI-CHANNEL EQUIPMENT (CHANNELIZE)
A 21 REMOVE/REPLACE PRINTED CIRCUIT CARDS/BOARDS
A 22 REMOVE/REPLACE SYNCHROS/RESOLVERS
A 23 REMOVE/REPLACE CATHODE RAY TUBES (CRT)
A 24 REMOVE/REPLACE KNOBS, LAMPS, FUSES, ETC.
A 25 REPLACE INDIVIDUAL ELECTRONIC COMPONENTS IN OTHER THAN MINIATURE OR MICRO-MINIATURE CIRCUITS (SWITCHES, RESISTORS, CAPACITORS, ETC.)

B--- ELECTRICAL MAINTENANCE

B 1 REMOVE/REPLACE PINS IN PLUGS/JACKS
B 2 REMOVE/REPLACE ELECTRIC MOTORS (BLOWER, DRIVE, SERVO, ETC.)
B 3 REMOVE/REPLACE PLUGS/JACKS
B 4 REPAIR/SPLICE ELECTRICAL WIRES
B 5 STRING/REPLACE ELECTRICAL WIRING IN EQUIPMENT
B 6 STRING/REPLACE ELECTRICAL WIRING IN BUILDING
B 7 MARK/CODE WIRES, CABLES, CONNECTIONS
B 8 SPOT TIE WIRING
B 9 ADJUST CATHODE RAY TUBE (CRT) DEFLECTION YOKES
B 10 DISPOSE OF FLUORESCENT/RADIOACTIVE TUBES
B 11 DISPOSE OF CATHODE RAY TUBES (CRT)

C--- ELECTRONIC/ELECTRICAL REPAIR

C 1 FABRICATE PRINTED CIRCUIT BOARDS
C 2 REPLACE SOLDER EYELETS ON PRINTED CIRCUIT BOARDS
C 3 REPAIR RUNS/BREAKS ON PRINTED CIRCUIT BOARDS
C 4 JUMPER RUNS ON PRINTED CIRCUIT BOARDS
C 5 REMOVE/REPLACE INDIVIDUAL ELECTRONIC COMPONENTS IN MINIATURE AND MICRO-MINIATURE CIRCUITS (RESISTORS, TRANSISTORS, I.C. CHIPS, ETC.)
C 6 FABRICATE INTERCONNECTING CABLES
C 7 FABRICATE COAXIAL CABLES
C 8 REPAIR INTERCONNECTING CABLES
C 9 BUILD/FABRICATE TEST SETS
C 10 REMOVE/REPLACE COMPONENTS IN ELECTRIC MOTORS/GENERATORS
C 11 REMOVE/REPLACE COMPONENTS IN HEADSETS
C 12 REPAIR COAXIAL CABLES
C 13 PERFORM TRAINING DEVICE ACCEPTANCE/TRANSFER INSPECTIONS

D--- AUDIO-VISUAL TRAINING EQUIPMENT

D 1 SET-UP TELEVISION PRODUCTION SETS
D 2 SCREEN (AUDITION) PERSONNEL FOR TELEVISION PRODUCTION
D 3 REVIEW TV SCRIPTS FOR PRODUCTION REQUIREMENTS
D 4 MONITOR CLOSED CIRCUIT TELEVISION (CCTV) SWITCHES FOR PROGRAM DISTRIBUTION
D 5 EDIT VIDEO TAPES
D 6 SPLICE VIDEO TAPES
D 7 INSPECT VIDEO TAPES
D 8 DEGAUSS VIDEO TAPES
D 9 ALIGN TELEVISION RECEIVERS
D 10 REMOVE/REPLACE VIDICON TUBES
D 11 ALIGN PROJECTOR MIRRORS/LENSES
D 12 CLEAN PROJECTOR MIRRORS/LENSES
D 13 INSPECT MOVIE FILM
D 14 CLEAN MOVIE FILM
D 15 SPLICE MOVIE FILM
D 16 PREPARE MOVIE FILM LISTING FOR DISTRIBUTION
D 17 ISSUE/INVENTORY MOVIE FILM
D 18 INSPECT SOUND RECORDING TAPE
D 19 DEGAUSS SOUND RECORDING TAPE
D 20 SPLICE SOUND RECORDING TAPE
D 21 INSPECT RECORDER HEADS
D 22 CLEAN RECORDER HEAD
D 23 REMOVE/REPLACE RECORDER HEAD
D 24 MANUFACTURE TRAINING AIDS
D 25 MAINTAIN INTERCOM/PUBLIC ADDRESS SYSTEMS

Table B-2 (Continued)

TDD STUDY TITLES

2TC-01A1 TDDTITLE PAGE

C--- ELECTRO/MECHANICAL MAINTENANCE

C 1 CLEAN ELECTRONIC EQUIPMENT/COMPONENTS
C 2 ADJUST MICROSWITCHES
C 3 ADJUST INDICATORS/GAGES (FUEL, COMPASS, PRESSURE, ETC.)
C 4 CLEAN AIR CONDITIONING COMPONENTS (COIL, FILTER, ETC.)
C 5 INSPECT COMPONENTS OF AIR CONDITIONING SYSTEMS
C 6 REMOVE/REPLACE COMPONENTS OF AIR CONDITIONING SYSTEMS (GEARS, CAMS, LEVERS, ETC.)
C 7 INSPECT MECHANICAL COMPONENTS
C 8 REMOVE/REPLACE MECHANICAL COMPONENTS
C 9 CLEAN/LUBRICATE MECHANICAL COMPONENTS
C 10 ADJUST/ALIGN MECHANICAL COMPONENTS
C 11 REMOVE/REPLACE PENS/STYLUS IN RECORDING EQUIPMENT
C 12 REPLACE PAPER IN RECORDING EQUIPMENT
C 13 INSTALL (SET UP) TEST BENCHES
C 14 INSTALL EQUIPMENT MOUNTING BRACKETS/RACKS
C 15 INCORPORATE MODIFICATION TO TRAINING DEVICES

F--- HYDRAULIC MAINTENANCE

F 1 CLEAN HYDRAULIC COMPONENTS (RESERVOIR, VALVE, ACTUATOR, ETC.)
F 2 INSPECT HYDRAULIC SYSTEM
F 3 REMOVE/REPLACE HYDRAULIC COMPONENTS (RESERVOIR, VALVES, ACTUATOR, ETC.)
F 4 REMOVE/REPLACE HYDRAULIC SYSTEM COMPONENTS (SEAL, GASKET, 'O' RING)
F 5 REMOVE/REPLACE HYDRAULIC SYSTEM FLEXIBLE/RIGID LINE
F 6 REMOVE/REPLACE HYDRAULIC SYSTEM FILTERS
F 7 SERVICE HYDRAULIC SYSTEMS (FILL, DRAIN, PURGE, ETC.)
F 8 ADJUST HYDRAULIC MOTION SYSTEM
F 9 ADJUST HYDRAULIC CONTROL LOADING SYSTEMS
F 10 TAKE HYDRAULIC FLUID SAMPLES

G--- TRAINING DEVICE OPERATION (AOP/EOP)

G 1 WRITE/DEVELOP COMPUTER PROGRAMS
G 2 WRITE/DEVELOP MAINTENANCE TROUBLESHOOTING PROGRAMS
G 3 KEYPUNCH CARDS FOR COMPUTER PROGRAMS
G 4 UPDATE COMPUTER PROGRAM TAPES/DISC
G 5 VERIFY COMPUTER PROGRAM TAPES/DISC
G 6 REPRODUCE COMPUTER PROGRAM TAPES/DISC
G 7 MAINTAIN TROUBLESHOOTING PROGRAMS
G 8 DEBUG TRAINING DEVICE PROGRAMS
G 9 LOAD COMPUTER PROGRAM TAPES/DISC ON COMPUTER
G 10 DEGAUSS COMPUTER PROGRAM TAPES
G 11 CLEAN COMPUTER PROGRAM TAPES
G 12 PERFORM OPERATIONAL CHECK ON TRAINING DEVICES
G 13 QUALIFY OPERATORS FOR INDIVIDUAL TRAINING DEVICES
G 14 CONDUCT FAMILIARIZATION TOURS OF TRAINING DEVICES
G 15 PROVIDE TECHNICAL INFORMATION CONCERNING OPERATIONAL USE/CAPABILITIES OF TRAINING DEVICES
G 16 WRITE OPERATIONAL PROCEDURES FOR TRAINING DEVICES
G 17 PLOT POSITION ON MAPS/CHARTS DURING TRAINING EXERCISE
G 18 MAINTAIN TRAINING DEVICE UTILIZATION AND EQUIPMENT HISTORY LOGS
G 19 RESEARCH PUBLICATIONS FOR TECHNICAL/PERFORMANCE DATA
G 20 RESEARCH COMPUTER DIAGNOSTIC PRINTOUT TO LOCATE PROBLEM

H--- TECHNICAL DRAWINGS

H 1 CONSTRUCT CHARTS, GRAPHS, POSTERS, ETC.
H 2 DRAW ELECTRONIC SCHEMATICS
H 3 DRAW WIRING DIAGRAMS
H 4 INTERPRET BLOCK DIAGRAMS
H 5 INTERPRET WIRING DIAGRAMS
H 6 INTERPRET MATRIX DIAGRAMS
H 7 INTERPRET MECHANICAL DIAGRAMS
H 8 INTERPRET SCHEMATIC DIAGRAMS
H 9 INTERPRET LOGIC DIAGRAMS

R--- DAMAGE CONTROL

R 1 TEST DAMAGE CONTROL EQUIPMENT/FITTINGS
R 2 CLEAN/INSPECT DAMAGE CONTROL EQUIPMENT/FITTINGS
R 3 INVENTORY DAMAGE CONTROL EQUIPMENT/FITTINGS
R 4 LUBRICATE DAMAGE CONTROL EQUIPMENT/FITTINGS
R 5 ADJUST DAMAGE CONTROL EQUIPMENT/FITTINGS
R 6 PRESERVE DAMAGE CONTROL EQUIPMENT/FITTINGS
R 7 REMOVE/REPLACE COMPONENTS ON DAMAGE CONTROL EQUIPMENT/FITTINGS
R 8 AFFIX DAMAGE CONTROL MARKINGS

T--- CORROSION CONTROL

T 1 INSPECT TRAINING DEVICE FOR CORROSION
T 2 INSPECT TRAINING DEVICE COMPONENTS FOR CORROSION
T 3 PREPARE TRAINING DEVICE SURFACE FOR PAINTING
T 4 PRIME/PAINT TRAINING DEVICE
T 5 CHEMICALLY TREAT METAL AFTER CORROSION REMOVAL
T 6 REMOVE CORROSION MECHANICALLY
T 7 PRIME/PAINT TRAINING DEVICE COMPONENTS (MOUNTS, TRAYS, BLACK BOXES, ETC.)
T 8 APPLY PRESERVATIVES TO METAL SURFACES
T 9 CLEAN ELECTRIC/ELECTRONIC EQUIPMENT USING SOLVENT
T 10 APPLY PRESERVATIVES TO ELECTRICAL/ELECTRONIC COMPONENTS (CANNON, PLUGS, CABLES, ETC.)

Table B-2 (Continued)

TDO STUDY TITLES 2TD-01A1 TTOTITLE PAGE

U--- MAINTENANCE PLANNING & QUALITY ASSURANCE

U 1 CONDUCT SAFETY INSPECTIONS
U 2 UPDATE TRAINING MATERIAL
U 3 DRAFT QUALITY DEFICIENCY REPORTS (QDR'S)
U 4 PREPARE/UPDATE PMS SCHEDULES
U 5 UPDATE PMS WITH QUARTERLY FORCE REVISION (QFR)
U 6 MAINTAIN DEPARTMENT/WORK CENTER 3M MANUAL
U 7 MAINTAIN DEPARTMENT/WORK CENTER MRC DECK
U 8 MAINTAIN JOB CONTROLNUMBER (JCN) LOG
U 9 MAINTAIN CURRENT SHIP'S MAINTENANCE PROJECT (CSMP)
U 10 MAINTAIN PARTIAL SOURCE DATA AUTOMATION (PSDA) SYSTEM
U 11 FILL OUT/SUBMIT MDCS FORMS
U 12 SCREEN MDCS FEEDBACK FORMS FOR ACCURACY/COMPLETENESS
U 13 FILL OUT/SUBMIT PMS FEEDBACK FORMS
U 14 SCREEN PMS FEEDBACK FORMS FOR ACCURACY/COMPLETENESS
U 15 PERFORM QUALITY ASSURANCE (QA) INSPECTIONS

V--- LOGISTIC SUPPORT & FINANCIAL CONTROL

V 1 AFFIX IDENTIFYING MARKS ON TOOLS/EQUIPMENT
V 2 ESTABLISH STOCKING LEVEL OF SPARE PARTS FOR NEW EQUIPMENT
V 3 FILL OUT SUPPLY FORMS (1348, 1250, 1149, ETC.)
V 4 ISSUE TOOLS, TEST EQUIPMENT, SPARE PARTS, SUPPLIES
V 5 MAINTAIN CUSTODY RECORDS/CARDS
V 6 ORDER REPAIR PARTS/TOOLS/SUPPLIES
V 7 CHECK STATUS OF OUTSTANDING REQUISITIONS
V 8 PREPARE MATERIAL FOR TURN-IN/SHIPMENT
V 9 PICK UP REPAIR PARTS/TOOLS/SUPPLIES
V 10 TURN IN REPAIR PARTS/TOOLS/SUPPLIES
V 11 INVENTORY PARTS/SUPPLIES/EQUIPMENT
V 12 SURVEY LOST/DAMAGED EQUIPMENT
V 13 UPDATE COSAL/SECAS/I'MRL
V 14 MAINTAIN DEPARTMENT/DIVISION OPTAR
V 15 MAINTAIN REQUISITION LOG/FILE
V 16 PREPARE BUDGET REQUESTS
V 17 FORECAST FUTURE BUDGET REQUIREMENTS

W--- GENERAL MILITARY

W 1 HOLD SWEEPDOWNS
W 2 PERFORM FIELD DAY
W 3 PAINT WORKING/LIVING SPACES
W 4 PARTICIPATE IN WORKING PARTIES
W 5 CONDUCT INSPECTIONS (EXCLUDING QUALITY ASSURANCE)
W 6 STAND INSPECTIONS
W 7 ATTEND QUARTERS
W 8 MAINTAIN DECK/WATCH LOGS
W 9 COUNSEL PERSONNEL

X--- TRAINING

X 1 ORGANIZE/MONITOR TRAINING PROGRAMS
X 2 SCHEDULE TRAINING
X 3 PREPARE TRAINING OUTLINES/LESSON GUIDES
X 4 REVIEW TRAINING OUTLINES/LESSON GUIDES FOR ACCURACY/COMPLETENESS
X 5 PREPARE TESTS/EXAMINATIONS
X 6 CONDUCT CLASSROOM TRAINING
X 7 CONDUCT ON-THE-JOB TRAINING (INCLUDING PQS,PAR,ETC)
X 8 CONDUCT DRILLS (GQ,FIREFIGHTING,ETC)
X 9 ATTEND CLASSROOM/ON-THE-JOB TRAINING
X 10 ADMINISTER TESTS/EXAMINATIONS (INCLUDING PQS,PAR,ETC)
X 11 PARTICIPATE IN DRILLS
X 12 MAINTAIN TRAINING RECORDS
X 13 PREPARE/SUBMIT TRAINING REPORTS

Y--- ADMINISTRATION

Y 1 PARTICIPATE IN "SELF HELP PROGRAM"
Y 2 EVALUATE AND RECOMMEND REQUIREMENTS FOR TECHNICAL ASSISTANCE FROM NAVAL TRAINING EQUIPMENT CENTER (NTEC)
Y 3 PREPARE TRAINING DEVICE MODIFICATION REQUEST
Y 4 WRITE REVISIONS TO EQUIPMENT OPERATING INSTRUCTIONS
Y 5 FILL OUT SUPPORT ACTION FORM (SAF)
Y 6 FILL OUT VISUAL INFORMATION DISPLAY SYSTEM/MAINTENANCE ACTION FORMS (VIDS/MAF)
Y 7 REVIEW/PREPARE RECOMMENDATION FOR CHANGES TO MAINTENANCE PARTS LIST (OIC, APL, PPL)
Y 8 RESEARCH PUBLICATIONS TO OBTAIN SUPPLY DATA
Y 9 FILL OUT TRAINING DEVICE UTILIZATION FORMS (TDUF)
Y 10 UPDATE VISUAL INFORMATION DISPLAY SYSTEM (VIDS) BOARDS
Y 11 DRAFT INSTRUCTIONS/NOTICES
Y 12 DRAFT CORRESPONDENCE (LETTERS,MEMORANDUMS,MESSAGES,ETC)
Y 13 TYPE CORRESPONDENCE
Y 14 TYPE INSTRUCTIONS/NOTICES
Y 15 CHOP OUTGOING CORRESPONDENCE
Y 16 SCREEN INCOMING CORRESPONDENCE
Y 17 ROUTE CORRESPONDENCE
Y 18 PREPARE REPORTS
Y 19 PREPARE WATCH BILLS
Y 20 UPDATE RECALL BILL
Y 21 UPDATE WATCH, QUARTER AND STATION BILL
Y 22 WRITE ENLISTED PERFORMANCE EVALUATIONS
Y 23 REVIEW ENLISTED PERFORMANCE EVALUATIONS
Y 24 MAINTAIN LEAVE SCHEDULES
Y 25 MAINTAIN DIVISION OFFICER'S NOTEBOOK
Y 26 MAINTAIN PUBLICATIONS/MANUALS
Y 27 MAINTAIN TICKLER FILE
Y 28 MAINTAIN STATUS BOARDS
Y 29 MAKE PERSONNEL ASSIGNMENTS
Y 30 ASSIGN WORK PRIORITIES

Table B-2 (Continued)

TDD STUDY TITLES	2TD-01A1	TDDTITLE PAGE
Y 31 REVISW MANPOWER REQUIREMENTS (DEPT/DIV LEVEL)		
Y 32 INITIATE ACTION TO OBTAIN REQUIRED PERSONNEL		
Y 33 EVALUATE OPERATIONAL COMMITMENTS TO SCHEDULE WORKLOAD		
Y 34 ATTEND MEETINGS/SEMINARS/CONFERENCES		
Y 35 CONDUCT MEETINGS/SEMINARS/CONFERENCES		

Table B-3

Job Description for Tradevman, Pay Grade E-2

Pay Grade E-2 2TD-01A1 ALL-E2S1 PAGE

TD RATING - JOB DESCRIPTIONS BY PAYGRADE & TOTAL
1 - PERCENT OF MEMBERS PERFORMING
3 - AVERAGE PERCENT OF TIME SPENT BY ALL MEMBERS
4 - ALPHABETICAL ORDER
SECOND STUDY - SCANNED -- DEC 81

DUTY	JOB DESCRIPTION	CASES	TASKS	DUTIES	MEMBERS
		914	235	15	18

COUNT OF DUTIES OR TASKS LISTED
CUMULATIVE SUM OF AVERAGE PERCENT TIME SPENT BY ALL MEMBERS
AVERAGE PERCENT TIME SPENT BY ALL MEMBERS
AVERAGE PERCENT TIME SPENT BY MEMBERS PERFORMING
ORDERED BY PERCENT OF MEMBERS PERFORMING

D-TSK	DUTY TITLE	% ****	%	%	%	N
W	GENERAL MILITARY	94.44	22.34	21.09	21.09	
A	ELECTRONIC MAINTENANCE	77.78	21.90	17.04	38.13	
Y	ADMINISTRATION	72.22	17.36	12.54	50.66	
G	TRAINING DEVICE OPERATION (ADP/EDP)	61.11	12.32	7.53	58.19	
X	TRAINING	61.11	9.99	6.10	64.30	5
U	MAINTENANCE PLANNING & QUALITY ASSURANCE	55.55	11.73	6.52	70.81	
V	LOGISTIC SUPPORT & FINANCIAL CONTROL	50.00	17.32	8.66	79.47	
E	ELECTRO/MECHANICAL MAINTENANCE	38.89	8.01	3.11	82.58	
C	ELECTRONIC/ELECTRICAL REPAIR	38.89	6.12	2.38	84.96	
D	AUDIO-VISUAL TRAINING EQUIPMENT	33.33	23.63	7.88	92.84	10
B	ELECTRICAL MAINTENANCE	33.33	8.01	2.67	95.50	
H	TECHNICAL DRAWINGS	33.33	12.14	4.04	99.55	
T	CORROSION CONTROL	16.66	2.33	0.39	99.94	

Table B-3 (Continued)

Pay Grade E-2

2TD-01A1 ALL-E2S1 PAGE

TD RATING - JOB DESCRIPTIONS BY PAYGRADE & TOTAL
1 - PERCENT OF MEMBERS PERFORMING
3 - AVERAGE PERCENT OF TIME SPENT BY ALL MEMBERS
4 - ALPHABETICAL ORDER
SECOND STUDY - SCANNED -- DEC 51

TASK	JOB DESCRIPTION	CASES	TASKS	DUTIES	MEMBERS
		914	235	15	18

COUNT OF DUTIES OR TASKS LISTED
CUMULATIVE SUM OF AVERAGE PERCENT TIME SPENT BY ALL MEMBERS
AVERAGE PERCENT TIME SPENT BY ALL MEMBERS
AVERAGE PERCENT TIME SPENT BY MEMBERS PERFORMING
ORDERED BY PERCENT OF MEMBERS PERFORMING

D-TSK	TASK TITLE	% ****	%	%	%	N
A 2	PERFORM FIELD DAY	83.33	10.36	8.63	8.63	
W 6	STAND INSPECTIONS	66.66	6.28	4.19	12.82	
W 7	ATTEND QUARTERS	61.11	6.32	3.86	16.68	
X 9	ATTEND CLASSROOM/ON-THE-JOB TRAINING	61.11	8.99	5.49	22.17	
A 1	VISUALLY INSPECT ELECTRONIC EQUIPMENT FOR DEFECTS	55.55	5.23	2.90	25.08	5
Y 6	FILL OUT VISUAL INFORMATION DISPLAY SYSTEM/MAINTENANCE ACTION FORMS (VIDS/MAF)	50.00	6.28	3.14	28.22	
A 5	MEASURE CURRENT	44.44	3.22	1.43	27.65	
A 4	MEASURE VOLTAGE	44.44	3.66	1.63	31.28	
Y 34	ATTEND MEETINGS/SEMINARS/CONFERENCES	44.44	14.08	6.26	37.53	
A 24	REMOVE/REPLACE KNOBS, LAMPS, FUSES, ETC.	33.33	4.33	1.70	39.23	10
G 12	PERFORM OPERATIONAL CHECK ON TRAINING DEVICES	38.89	6.11	2.37	41.60	
A 2	VISUALLY INSPECT ELECTRONIC COMPONENTS FOR DEFECTS	38.89	4.21	1.64	43.24	
H 4	INTERPRET BLOCK DIAGRAMS	33.33	3.01	1.00	44.24	
H 5	INTERPRET WIRING DIAGRAMS	33.33	2.66	0.88	45.13	
H 3	INTERPRET SCHEMATIC DIAGRAMS	33.33	3.22	1.07	46.20	15
U 8	MAINTAIN JOB CONTROLNUMBER (JCN) LOG	33.33	7.82	2.60	48.80	
A 6	MEASURE RESISTANCE	33.33	2.04	0.68	49.48	
D 22	CLEAN RECORDER HEAD	27.78	3.00	0.83	50.32	
G 9	LOAD COMPUTER PROGRAM TAPES/DISC ON COMPUTER	27.78	10.51	2.92	53.23	
W 8	MAINTAIN DECK/WATCH LOGS	27.78	6.37	1.77	55.00	20
A 8	MEASURE FREQUENCY	27.78	2.34	0.65	55.65	
A 10	PERFORM CONTINUITY CHECKS	22.22	3.21	0.71	56.36	
B 3	REMOVE/REPLACE PLUGS/JACKS	22.22	3.04	0.68	57.04	
B 4	REPAIR/SPLICE ELECTRICAL WIRES	22.22	3.64	0.81	57.84	
E 7	INSPECT MECHANICAL COMPONENTS	22.22	3.28	0.73	58.57	25
A 11	ADJUST LOW VOLTAGE POWER SUPPLIES	22.22	2.16	0.48	59.05	
A 15	ADJUST POTENTIOMETERS	22.22	4.36	0.97	60.02	
V 9	PICK UP REPAIR PARTS/TOOLS/SUPPLIES	22.22	2.85	0.63	60.65	

Table B-3 (Continued)

Pay Grade E-2 — 2TD-01A1 — ALL-E2S1 — PAGE

C-TSK	TASK TITLE	% ****	%	%	%	N
V 11	INVENTORY PARTS/SUPPLIES/EQUIPMENT	22.22	7.16	1.59	62.24	
W 1	HOLD SHEEPDOWNS	22.22	5.67	1.26	63.50	30
W 4	PARTICIPATE IN WORKING PARTIES	22.22	5.87	1.30	64.81	
A 12	ADJUST HIGH VOLTAGE POWER SUPPLIES	22.22	1.91	0.42	65.23	
A 3	TEST CIRCUITS FOR PROPER PHASE SEQUENCE	22.22	3.62	0.80	66.04	
Y 5	FILL OUT SUPPORT ACTION FORM (SAF)	22.22	4.75	1.05	67.09	
Y 8	RESEARCH PUBLICATIONS TO OBTAIN SUPPLY DATA	22.22	5.00	1.12	68.21	35
C 11	REMOVE/REPLACE COMPONENTS IN HEADSETS	16.66	3.16	0.52	68.74	
C 12	REPAIR COAXIAL CABLES	16.66	1.47	0.24	68.98	
D 13	INSPECT MOVIE FILM	16.66	5.96	0.99	69.97	
D 21	INSPECT RECORDER HEADS	16.66	2.35	0.39	70.36	
E 1	CLEAN ELECTRONIC EQUIPMENT/COMPONENTS	16.66	1.59	0.26	70.63	40
E 4	CLEAN AIR CONDITIONING COMPONENTS (COIL, FILTER, ETC.)	16.66	3.07	0.51	71.14	
E 8	REMOVE/REPLACE MECHANICAL COMPONENTS	16.66	2.51	0.42	71.56	
E 9	CLEAN/LUBRICATE MECHANICAL COMPONENTS	16.66	2.12	0.35	71.91	
E 10	ADJUST/ALIGN MECHANICAL COMPONENTS	16.66	1.73	0.29	72.20	
A 12	SIGNAL IMAGE EQUIPMENT	16.66	2.62	0.44	72.63	45
B 1	REMOVE/REPLACE PINS IN PLUGS/JACKS	16.66	2.90	0.48	73.11	
H 9	INTERPRET LOGIC DIAGRAMS	16.66	3.56	0.59	73.70	
A 16	ADJUST/ALIGN SCOPES (RADAR, ECM, ETC.)	16.66	3.60	0.60	74.30	
V 3	FILL OUT SUPPLY FORMS (1348, 1250, 1149, ETC.)	16.66	5.86	0.98	75.28	
V 10	TURN IN REPAIR PARTS/TOOLS/SUPPLIES	16.66	11.10	1.85	77.13	50
B 5	STRING/REPLACE ELECTRICAL WIRING IN EQUIPMENT	16.66	2.07	0.35	77.48	
A 7	MEASURE CAPACITANCE	16.66	1.14	0.19	77.66	
X 11	PARTICIPATE IN DRILLS	16.66	2.30	0.38	78.05	
A 9	MEASURE FREQUENCY (RF) POWER OUTPUT	16.66	3.30	0.55	78.60	
D 6	SPLICE VIDEO TAPES	11.11	2.51	0.28	78.87	55
D 7	INSPECT VIDEO TAPES	11.11	2.51	0.28	79.15	
D 9	ALIGN TELEVISION RECEIVERS	11.11	3.46	0.38	79.53	
C 2	REPLACE SOLDER EYELETS ON PRINTED CIRCUIT BOARDS	11.11	1.42	0.16	79.69	
D 14	CLEAN MOVIE FILM	11.11	3.00	0.33	80.02	
D 15	SPLICE MOVIE FILM	11.11	2.46	0.27	80.29	60
D 16	PREPARE MOVIE FILM LISTING FOR DISTRIBUTION	11.11	4.68	0.52	80.81	
D 17	ISSUE/INVENTORY MOVIE FILM	11.11	3.56	0.39	81.20	
D 18	INSPECT SOUND RECORDING TAPE	11.11	0.86	0.10	81.30	
D 20	SPLICE SOUND RECORDING TAPE	11.11	0.86	0.10	81.39	
C 3	REPAIR RUNS/BREAKS ON PRINTED CIRCUIT BOARDS	11.11	1.11	0.12	81.51	65
C 4	JUMPER RUNS ON PRINTED CIRCUIT BOARDS	11.11	1.11	0.12	81.63	
C 5	REMOVE/REPLACE INDIVIDUAL ELECTRONIC COMPONENTS IN MINIATURE AND MICRO-MINIATURE CIRCUITS (RESISTORS, TRANSISTORS, I.C. CHIPS, ETC.)	11.11	1.11	0.12	81.75	
E 5	INSPECT COMPONENTS OF AIR CONDITIONING SYSTEMS	11.11	3.43	0.38	82.13	
A 25	REPLACE INDIVIDUAL ELECTRONIC COMPONENTS IN OTHER THAN MINIATURE OR MICRO-MINIATURE CIRCUITS (SWITCHES, RESISTORS, CAPACITORS, ETC.)	11.11	1.37	0.15	82.28	
C 7	FABRICATE COAXIAL CABLES	11.11	1.10	0.13	82.41	70

Table B-3 (Continued)

Pay Grade E-2

D-TSK	TASK TITLE	% ****	%	%	%	N
			2TD-0181		ALL-E2S1	PAGE
G 1	WRITE/DEVELOP COMPUTER PROGRAMS	11.11	1.79	0.19	82.60	
G 2	WRITE/DEVELOP MAINTENANCE TROUBLESHOOTING PROGRAMS	11.11	3.74	0.41	93.01	
H 7	INTERPRET MECHANICAL DIAGRAMS	11.11	3.83	0.42	83.44	
B 2	REMOVE/REPLACE ELECTRIC MOTORS (BLOWER, DRIVE, SERVO, ETC.)	11.11	1.48	0.16	83.60	
I 9	CLEAN ELECTRIC/ELECTRONIC EQUIPMENT USING SOLVENT	11.11	2.44	0.27	83.87	75
U 2	UPDATE TRAINING MATERIAL	11.11	28.64	3.18	87.05	
U 4	PREPARE/UPDATE PMS SCHEDULES	11.11	3.58	0.40	87.44	
V 4	ISSUE TOOLS, TEST EQUIPMENT, SPARE PARTS, SUPPLIES	11.11	9.12	1.01	88.46	
V 6	ORDER REPAIR PARTS/TOOLS/SUPPLIES	11.11	5.14	0.57	89.02	
V 3	PREPARE MATERIAL FOR TURN-IN/SHIPMENT	11.11	10.71	1.19	90.21	80
A 21	REMOVE/REPLACE PRINTED CIRCUIT CARDS/BOARDS	11.11	2.93	0.32	90.54	
Y 28	MAINTAIN STATUS BOARDS	11.11	7.56	0.84	91.38	
D 5	EDIT VIDEO TAPES	11.11	2.51	0.28	91.65	
C 8	REPAIR INTERCONNECTING CABLES	5.55	0.63	0.03	91.68	
E 11	REMOVE/REPLACE PENS/STYLUS IN RECORDING EQUIPMENT	5.55	1.90	0.10	91.72	85
A 16	ADJUST OSCILLATORS	5.55	6.03	0.33	92.12	
G 6	REPRODUCE COMPUTER PROGRAM TAPES/DISC	5.55	9.08	0.50	92.62	
G 7	MAINTAIN TROUBLESHOOTING PROGRAMS	5.55	2.58	0.14	92.76	
G 10	DEGAUSS COMPUTER PROGRAM TAPES	5.55	15.21	0.84	93.61	
G 14	CONDUCT FAMILIARIZATION HOURS OF TRAINING DEVICES	5.55	1.27	0.07	93.68	90
G 18	MAINTAIN TRAINING DEVICE UTILIZATION AND EQUIPMENT HISTORY LOGS	5.55	1.17	0.06	93.74	
H 3	DRAW WIRING DIAGRAMS	5.55	1.05	0.06	93.80	
A 13	ADJUST SYNCHROS/RESOLVERS	5.55	1.05	0.06	93.85	
D 25	MAINTAIN INTERCOM/PUBLIC ADDRESS SYSTEMS	5.55	4.39	0.24	94.09	
I 1	INSPECT TRAINING DEVICE FOR CORROSION	5.55	1.05	0.06	94.15	95
D 8	DEGAUSS VIDEO TAPES	5.55	0.63	0.03	94.18	
T 10	APPLY PRESERVATIVES TO ELECTRICAL/ELECTRONIC COMPONENTS (CANNON, PLUGS, CABLES, ETC.)	5.55	1.05	0.06	94.24	
U 1	CONDUCT SAFETY INSPECTIONS	5.55	2.58	0.14	94.33	
E 2	ADJUST MICROSWITCHES	5.55	1.05	0.06	94.43	
U 7	MAINTAIN DEPARTMENT/WORK CENTER MAC DECK	5.55	3.35	0.18	94.62	100
V 2	ESTABLISH STOCKING LEVEL OF SPARE PARTS FOR NEW EQUIPMENT	5.55	11.10	0.62	95.23	
C 13	PERFORM TRAINING DEVICE ACCEPTANCE/TRANSFER INSPECTIONS	5.55	15.21	0.84	96.01	
V 5	MAINTAIN CUSTODY RECORDS/CARDS	5.55	3.82	0.21	96.29	
A 23	REMOVE/REPLACE CATHODE RAY TUBES (CRT)	5.55	0.63	0.03	96.32	
D 1	SET-UP TELEVISION PRODUCTION SETS	5.55	7.60	0.42	96.74	105
A 22	REMOVE/REPLACE SYNCHROS/RESOLVERS	5.55	1.05	0.06	96.80	
D 2	SCREEN (AUDITION) PERSONNEL FOR TELEVISION PRODUCTION	5.55	7.69	0.42	97.22	
D 3	REVIEW TV SCRIPTS FOR PRODUCTION REQUIREMENTS	5.55	7.69	0.42	97.65	
W 3	PAINT WORKING/LIVING SPACES	5.55	1.17	0.06	97.71	
B 7	MARK/CODE WIRES, CABLES, CONNECTIONS	5.55	1.05	0.06	97.77	110
J 8	SPOT TIE WIRING	5.55	1.05	0.06	97.82	
A 20	PRE-SET FREQUENCIES ON MULTI-CHANNEL EQUIPMENT (CHANNELIZE)	5.55	3.52	0.19	98.02	
D 11	ALIGN PROJECTOR MIRRORS/LENSES	5.55	7.69	0.42	98.44	

Table B-3 (Continued)

Pay Grade E-2 2TD-01A1 ALL-E2S1 PAGE 5

D-TSK	TASK TITLE	% ****	%	%	%	N
D 4	MONITOR CLOSED CIRCUIT TELEVISION (CCTV) SWITCHES FOR PROGRAM DISTRIBUTION	5.55	7.69	0.42	98.86	
X 12	MAINTAIN TRAINING RECORDS	5.55	4.20	0.23	99.10	115
B 9	ADJUST CATHODE RAY TUBE (CRT) DEFLECTION YOKES	5.55	1.27	0.07	99.16	
A 17	ADJUST TRANSMITTER FREQUENCY	5.55	1.05	0.06	99.22	
Y 9	FILL OUT TRAINING DEVICE UTILIZATION FORMS (TDUF)	5.55	2.04	0.11	99.33	
C 6	FABRICATE INTERCONNECTING CABLES	5.55	1.27	0.07	99.40	
D 12	CLEAN PROJECTOR MIRRORS/LENSES	5.55	5.49	0.30	99.70	120

Table B-4

Format of Raw Data for Tradevman (Variables 1-45)

Card	Columns	Variable	Description
1	1-5	1	Case control number
1	6-8	2	Rating
1	9-12	3	Ship or station activity code (first 4 digits)
1	13-18	4	Ship or station activity code (last 6 digits)
1	19	5	Naval category (USN = 1, USNR = 2, SURTAR =3, AIRTAR = 4)
1	20	6	Pay grade
1	21-24	7	Assigned primary NEC
1	25-28	8	Assigned to secondary NEC
1	29	9	Distribution pay grade
1	30-33	10	Distribution primary NEC
1	34-37	11	Distribution secondary NEC
1	38	12	Sex (male = 1, female = 2)
1	39	13	Marital status (single = 1, married = 2)
1	40	14	How much do you use your assigned PRI NEC skills in job? (None = 1, some = 2, very much = 3, not applicable = 4)
1	41	15	How much do you use your assigned SEC NEC skills in job? (None = 1, some = 2, very much = 3, not applicable = 4)
1	42	16	Entered my rating through ("A" school = 1, "C" school = 2, OJT/exam = 3, conversion = 4, direct procurements = 5)
1	43	17	Geographic location (Atlantic Fleet = 1, Pacific Fleet = 2, CONUS E. (ashore) = 3, CONUS W. (ashore) = 4, overseas shore = 5, other = 6)
1	44-46	18	EAOS (MMY)
1	47	19	Method of administration (team administration = 1, command proctor = 2, ind. mailout = 3)
1	48-56	20	Social security account number
1	57-58	21	Years of active duty
1	59-60	22	Months of active duty
1	61-62	23	Amount of time served at my present command (months)
1	63-65	24	Amount of time served at my present grade (months)
1	66-67	25	GI/CLER

Table B-4 (Continued)

Card	Columns	Variable	Description
1	68-69	26	NO
1	70-71	27	AD
1	72-73	28	WK/GCT test scores
1	74-75	29	AR/ARI
1	76-77	30	SP
1	78	31	Enlistment status (1st enlistment = 1, extension of 1st = 2, 2nd enlistment = 3, extension of 2nd = 4, 3rd enlistment = 5, extension of 3rd = 6, 4th enlistment = 7, extension of 4th = 8, 5th enlistment or more = 9)
1	79	32	Test battery (BTB = 1, ASVAB = 2)
2	1-2	33	MK
2	3-4	34	EI
2	5-6	35	MC/MECH
2	7-8	36	GS test scores
2	9-10	37	SI/SHOP
2	11-12	38	AI
2	13-14	39	Highest grade
2	15	40	Degree or diploma (none = 0, elementary = 1, high school = 2, high school (GED) = 3, associate = 4, bachelors = 5, masters = 6, doctorate = 7, vocational training = 8)
2	16-17	41	Number of people I directly supervise
2	18	42	Number of duty sections standing my watch--underway
2	19	43	Number of duty sections standing my watch--in port/ashore
2	20-21	44	Number of months I have worked out of my rating at this command
2	22	45	At the end of enlistment I will (separate = 1, probably separate = 2, probably retire = 3, uncertain = 4, retire = 5, probably reenlist = 6, reenlist = 7, transfer to fleet reserve = 8)

Table B-5

Dump of Raw Data Record for Tradevman

```
RECORD NO.    1 READS:        Dump of Raw Data Record for Tradevman
         1         2         3         4         5         6         7         8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
00640TD 04030061002400000000400000000011443209213857474560111180025452685852565 2
5357415153121220778031041000     1   1  1
                                             3                  3
                              2
                                               2       4








     21
                                1312
                                                    13
                                           23                                3
53737372727 26                      26                        2725
23  13               12

















                    21323231424232  434 324232  433 3121  3332114332434443
4242333333343  2534444444434445453133322523233323    413232344433      1515

   54112


```

APPENDIX C

ENLISTED HISTORY FILE (EHF)

ENLISTED HISTORY FILE (EHF)

1. Background. The enlisted history file (EHF) is a longitudinal data base that was developed by the Naval Health Research Center (NHRC) to provide data required for health studies on Navy enlisted personnel. Original development of the file began in 1968. It was fully operational by 1975 and has been extensively modified in recent years.

EHF contains information on all enlisted personnel who have been on active duty for any period of time since January 1, 1965. The data base contains both demographic records and change records. A change record occurs whenever an individual's status has changed with respect to service information (e.g., rating, pay grade, and duty station).

2. Purpose/Applications. The original purpose of EHF was to provide data to support longitudinal studies conducted by NHRC and the Bureau of Medicine and Surgery (BUMED). It has been used extensively to (a) compare populations before and after treatments, (b) examine changes that occur to populations over time or during wartime versus peacetime, and (c) examine historical data in retrospective and prospective studies.

The file has been the primary source of data for numerous psychiatric, drug, alcohol, and cancer studies. Recent health studies in which it has been used include the following:

a. Cancer among Navy Personnel: Incidence and Mortality, Anne Hoiberg and John Ernst.

b. Cancer among Navy Personnel: Occupational Comparisons, Anne Hoiberg.

c. Effects of Sickle Cell Trait and G-6-PD Deficiency on Health and Military: Performance in Black Navy Enlistees, Anne Hoiberg, John Ernst, and David Uddin.

d. Military Effectiveness of Navy Men During and After Vietnam, Anne Hoiberg.

e. Racial Differences in Hospitalization Rates among Navy Enlisted Men, Anne Hoiberg and Steven Berard.

The file is now also being used for enlisted personnel studies in areas outside the medical and health field. It has been used by OP-987H for an unauthorized absence/desertion study and will be used by NAVPERSRANDCEN for retention, accession, and turbulence projects.

3. System Description. EHF is generated by NHRC from the end of quarter enlisted master record (EMR) file and monthly EMR audit-trail files, both of which are prepared by NMPC-165. Extensive editing of the input data is performed during update processing. The validity of all codes and dates required to construct EHF records are checked.

Extractions from EHF are created by a general-purpose extraction program that is run by knowledgeable NHRC personnel. The update processing and extraction programs are written in COBOL.

4. Manager/Contact.

Mr. Milan Miller
Naval Health Research Center, P. O. Box 85122
San Diego, CA 92138
Autovon: 933-2061, Commercial: (619) 225-2061.

5. Resident Computer. Developmental data processing is performed on IBM computers (370, 3033, 3081) located at the Litton Mellonics Information Center, 6701 Variel, Conoga Park, California 91303. Routine data processing is performed on an IBM 370/3033, located at the Argonne National Laboratory, 9700 South Cass Avenue, Chicago, Illinois 60439.

6. Data.

a. Reports. Reports needed by specific users, such as the Navy Alcohol Drug Information System, are generated on a routine basis. Also, reports are generated during update processing to identify erroneous input data, missing data, and unusual occurrences. The reports include lists of individuals for whom there are no accession records and lists of those whose status has remained unchanged for years.

b. Files. EHF contains two types of records: service history summary records and change records. For each individual, there is one service history summary record (80 characters) and up to 75 change records (60 characters). The service history summary record contains demographic items, some static service history items, and summaries of some of the change actions. The change record appears as often as required to indicate changes such as promotions, demotions, enlistments, reenlistments, unauthorized absences, desertions, and discharges. The EHF record length is variable from 140 to 4580 characters per record. The data base is sorted by social security number/service number, date of occurrence, and change code.

Table C-1 presents a record layout for one service history summary record and two change records. The contents of the last 10 characters of the service history summary record vary according to the change code. Miller (1980) provides a detailed description of all the variables and valid variable codes.

Many variables are created during update processing, including change codes for demotions and promotions, the enlisted history status code, total promotions/demotions, total unauthorized absences, total desertions, total military and civilian confinements, and age. Table C-2 provides a sample dump of the EHF.

7. Classification. EHF is unclassified.

8. Update Frequency. EHF is updated quarterly.

9. Developmental Plans. Menu-driven software is being developed to allow users to create their own extractions for EHF. This software will be a combination of the IBM system productivity facility (SPF) software packages and PL-1 routines that access EHF. The new software will provide the following attributes:

a. An option for selecting file documentation.

b. Capability of pointing to desired variables and selecting only specific variable values or ranges.

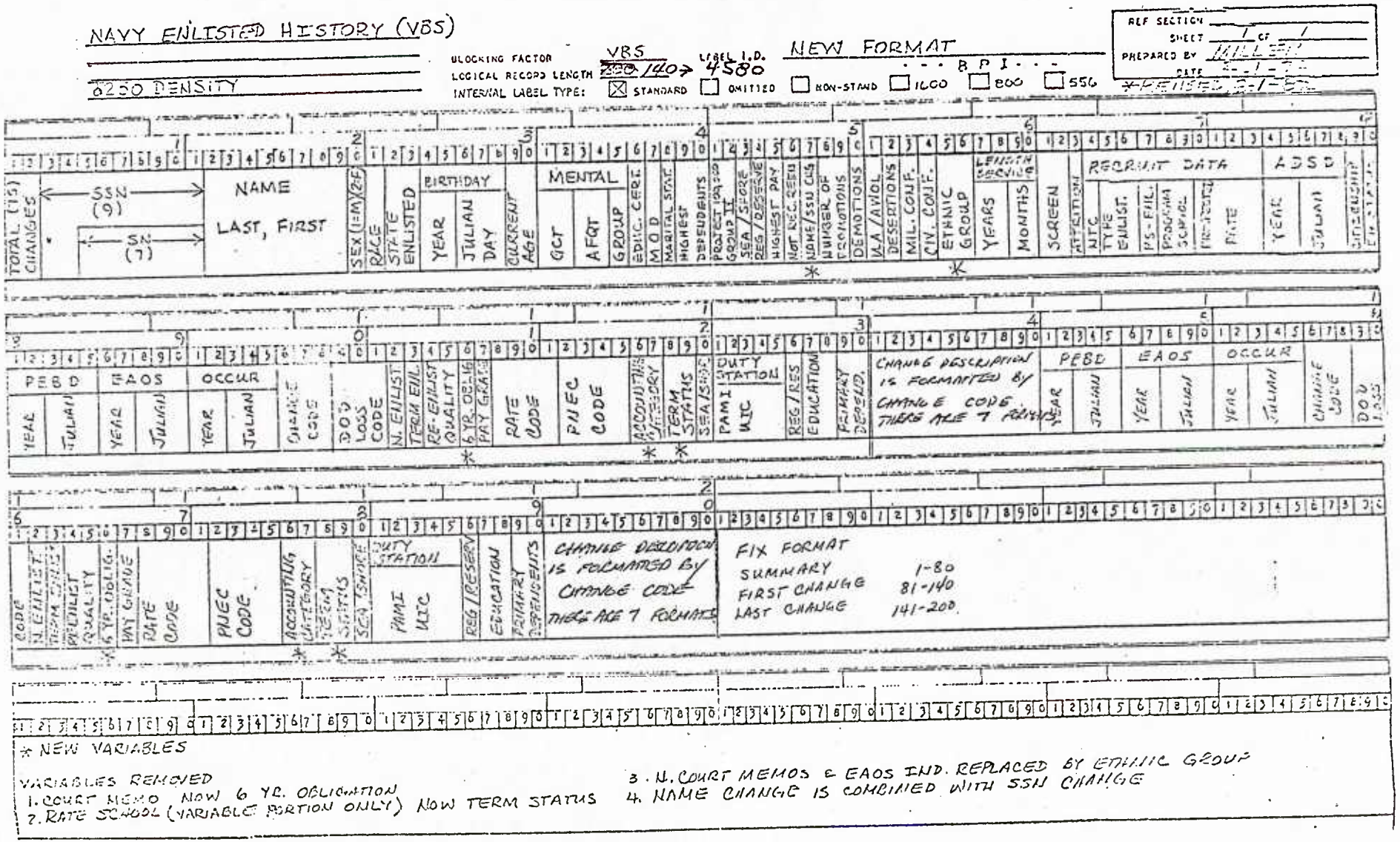
c. Capability of storing selection criteria in tables for future use.

d. Facility for writing extractions to tape or disk.

e. File compatibility with the statistical analysis system (SAS) software package.

Table C-1

Record Layout of Enlisted History File



* NEW VARIABLES

VARIABLES REMOVED

1. COURT MEMO NOW 6 YR. OBLIGATION
2. RATE SCHOOL (VARIABLE PORTION ONLY) NOW TERM STATUS
3. N. COURT MEMOS & EAOS IND. REPLACED BY ETHNIC GROUP
4. NAME CHANGE IS COMBINED WITH SSN CHANGE

Table C-2

Dump of Enlisted History File

```
06111111111SMITH MI1036490002242- 5--100- 113000200100- 0210- 23- -- -   -    -3
6800657006358065101-   12- -136000000- - 1C65021- 00
6800657006358142328-   12- -256000000- - 1C65021- 00
6800657006358175951-   12- -236000000- - 1C18281- 00
6800657006370096193-   12- -236000000- - 1C18281- 00
6800657006370097328-   12- -336000000- - 1C18281- 00
6800657135971028882-   12- -336000000- - 1C18281- 00

06222222227JONES JO1033203375453643--304- 337000000000- 1001- 19- -- -   -    -3
4027967180651811955-   56- -753000000- - -P00002- 04
4027967180653203365-   56- -753000000- - 3P97972- 04
4027969334672998206-   56- -753000000- - 2L92122- 04
4027987329967300110-   16- -753000000- - 2L92121- 04
4027987329972257336-   16- -753000000- - 1L83031- 03
4027987529975220931217162O-753000000- - 160087711210

42333333333RAYE DAY1051210126055793202O2- 125010000000341400- 19- -- -   6304614
2360670926700319S5-   34- -539000000- - -P00002- 02
2360670926709299A3-   34- -539000000- - 1C31632- 02
2360672466709419S5-   34- -539000000- - -P00002- 02
2360672466712105S3-   34- -539000000- - -P00002- 02
2360672466724399A3-   34- -539000000- - 1C31632- 02
2360680326724519S5-   34- -539000000- - 1C31632- 02
2360680326802999A3-   34- -539000000- - 1C31632- 02
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3000360182681809A3-   34- -539000000- - 1C33062- 02
3000360334683218219S5-   34- -539000000- - 1C33062- 02
3000360334683319A3-   34- -539000000- - 1C33062- 02
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4634457035870355943-   34- -539000000- - 1C33062- 02
4634457114270357195S-   34- -539000000- - 1C33062- 02
4634457114271111336-   34- -539000000- - 1C33062- 02
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4634457129571202943-   34- -539000000- - 1C33062- 02
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4634457208072078943-   34- -539000000- - 1L63362- 02
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4634457232721879A3-   34- -539000000- - 1L63362- 02
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2359783117531219S5-   14- -539000000- - 1000222120O2
2359782747812233B7-   34- -539000000- 351000222120O2
2359782737812333O-   34- -539000000- 351000222120O2
2359790897827438T-   34- -539000000- 351000222120O2
2359800907909038T-   34- -539000000- 351000222120O2
2359801888018280231334l0-539000000- 351000222120O2
2359801888018283131-  42- -539000000- 351000222120O2
```

```
52359810129101294221242 10-539000000033510002221201MBK11-0000

104444444444RIVERA J10333111147- - -20203- 126000100000331303- 19- -- -   6102314
512966802455025195-   36- -517000000- - -800002- 02
512966902468091328-   36- -617000000- - 1C10042- 02
512966902468182336-   36- -617000000- - 1C10042- 03
512966902468298802-   36- -617000000- - 1C10042- 03
512966902468299131-   44- -617000000- - 1C10042- 03
512967229872205801-   44- -617000000- - 1L65082- 03
512967229872206131-   52- -617000000- - 1L65082- 03
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672907204368306328-   14- -378006630- - 1C96151- 00
672907204369090328-   14- -463066630- - 1C96151- 00

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652266692656531932 8-   14- -236002300- - 1C65021- 00
652266692656536232 7-   14- -236000000- - 2L11381- 00
652266692656616732 8-   14- -378002300- - 2L11381- 00
652266692656725932 8-   14- -367060000- - 2L11381- 00
652266692656732032 8-   14- -467060000- - 2L11381- 00
652266692656818433 6-   14- -467060000- - 2L11381- 01
652266692656907533 6-   14- -467060000- - 2L11381- 02
652266692656926294 2-   14- -467060000- - 2L11381- 02

067777777777COCHRAN 10403814143- - -20202261160003000000330708- 09- -- -   6207411
620137800674007111-   14- -336000000- - -3199811502
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620137800676137328-   14- -580008482- - 13332911502
620137800677279802313 11-580008482- - 13332911502
620138327977280130-   26- -580008482- - 13332911502
620138327978197328-   26- -680008482- 02339163115 02

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592136927265273111-   14- -378000000- - -800001- 02
592136927265299336-   14- -378000000- - -800001- 02
592136927266106328-   14- -468007100- - 2P21681- 02
592136927267078336-   14- -468000000- - 2P21681- 10
592136927267106328-   14- -568000000- - 2P21681- 10
592136927268252811-   14- -568008339- - 1C11801- 10
592137425168253130-   26- -568008339- - 1C11801- 10
592137425169258328-   26- -668008339- - 1C11801- 10
592137425171111336-   26- -668008339- - 1L00041- 03
592137425174160802-   2611-668008339- - 20996311203
592138016174161131-   36- -668008339- - 20996311203
592138016180091802313 611-668008306- 03209946711203
592138409180092131-   44- -668008306- 04209946711203

059999999999GREY HAR10503928840654748 0204- 336000100000330600 7819- -- -   7220413
672597611674116195-   14- -522900000- - 20717721603
672597611676047328-   14- -622003502- - 20505721602
672597611676113806-   1411-622003502- - 20505721603
672598011376114110-   14- -622003502- - 20505711603
672598011380113801313 410-622003524- 01160201116 04
```

Other developments will include the generation of commonly used cohort files from EHF. Users will be able to exercise the menu-driven software on these cohort files.

10. Limitations/Problems. In spite of extensive error checkings, erroneous data may still be introduced to EHF from the EMR and EMR audit-trail files. Input variables that contain erroneous but valid codes may not be rejected during error checking. Users should be advised that, due to the error checking of EMR and audit-trail files, the EHF file is not 100 percent consistent with official enlisted Navy reports. The official reports are based on EMR and audit-trail files that contain some errors.

APPENDIX D

NAVY COST INFORMATION SYSTEM/FIVE YEAR DEFENSE PROGRAM SUBSYSTEM (NCIS/FYDP)

NAVY COST INFORMATION SYSTEM/FIVE YEAR DEFENSE PROGRAM SUBSYSTEM (NCIS/FYDP)

1. Background. The Navy cost information system/five-year defense program subsystem (NCIS/FYDP) is a financial management information system that was developed during 1962-1963 by the Navy Regional Data Automation Center (NARDAC) to meet the reporting requirements of the Office of the Secretary of Defense (OSD). The Navy's five year defense program (FYDP) was the initial system of the NCIS, which has now been expanded to include other subsystems.[1]

The three basic components of the system are (a) the software for updating the data base (FYDP master file), (b) the software for generating over 75 reports, and (c) the FYDP master file and dictionaries. The data base contains manpower quantities, force inventories, and funding, which are recorded by program elements, unit identification codes (FUICs), major claimant, and other programming, budgeting, and accounting codes. The data base extends over a period of time from FY 1962 to 8 years past the current year.

2. Purpose/Applications. The primary purpose of NCIS/FYDP is to assist Navy managers in meeting the report requirements of the FYDP. Specific uses of the NCIS/FYDP subsystem include the following:

a. Fulfilling OSD report requirements.

b. Orienting planning around programs, missions, appropriations, and management.

c. Coordinating long-range planning with the annual budget process.

d. Relating resources to military outputs.

e. Monitoring actual obligations as compared to program for the current year for the operating appropriations.

The NCIS/FYDP has been used by budgeteers, OSD, intelligence activities, shore establishment projects, major claimants, appropriation sponsors, program element sponsors, NAVPERSRANDCEN, and persons making special studies of Congressional inquiries.

3. System Description. NCIS/FYDP is updated using the following four primary data sources:

a. Major claimant data--Consists of manpower quantities and funding.
b. Ship management information system (SMIS)--Contains ship inventories.
c. Aircraft program data file (APDF)--Contains aircraft inventory counts.
d. Navy Military Personnel Command (NMPC) data--Consists of officer and enlisted manpower quantities and funding.

The input data is validated during data base update processing, which occurs four times annually. Accounting codes of claimant data are checked against those contained in dictionaries. Approximately 14 dictionaries are used with NCIS/FYDP, each containing the valid code numbers and corresponding code titles. When invalid codes are

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[1]The FYDP documents approved Department of Defense forces, resources, and funding levels.

found, the input data is rejected and the erroneous codes are printed out in an error report. Other input data is also edited.

Many reports are generated routinely for both Navy organizations and OSD. The dictionaries and reports will be discussed in more detail in subsequent sections.

4. Manager/Contacts.

a. Manager/Contact.

Mr. Rex Brouillard
Navy Accounting and Finance Center 64
Room 4C453
Pentagon
Washington, DC 20350
Autovon: 227-0747, Commercial: (202) 697-0747.

b. Additional Contact.

Mr. Paul Amyot
Navy Accounting and Finance Center 64
Room 4C453
Pentagon
Washington, DC 20350
Autovon: 227-0747, Commercial: (202) 697-0747.

5. Resident Computer. NCIS/FYDP resides on a UNIVAC 1143 computer at NARDAC.

6. Data.

a. Reports. More than 75 reports can be generated for various users. The titles of many of the reports are found in the user documentation prepared by the Department of the Navy Office of the Comptroller. One of the major reports is The Five Year Defense Summary Program Element Detail (PESD), which is generated after every OSD directed update. This report shows the distribution of Navy resources by program elements, cost category, appropriation, type of manpower, and type of force.

Examples of several reports that are generated on a routine basis are given in Tables D-1 and D-2. Table D-1 is a sample of the report PT01, Civilian Manpower by Program Element by Source Category, which contains civilian manpower end-strengths from FY 1981 to FY 1987. Table D-2 is a sample of the report PT04, Military Personnel by Program Element. Both end-strengths and funding are included from FY 1982 to FY 1987.

b. Files. The major files of NCIS/FYDP are the dictionaries and the FYDP master file.

(1) Dictionaries. NCIS/FYDP uses a series of dictionaries to define and describe the values that may be represented by various accounting codes. The primary purposes of the dictionaries are (a) to allow claimants to identify and classify input data, (b) to serve as a source of titles for reports, (c) to enable update processing routines to check the validity of codes, and (d) to assist users in understanding and accessing the data base. The dictionaries listed and described in Table D-3 are included in NCIS/FYDP.

Table D-1

Example of PT01, Civilian Manpower by Program Element by Resource Category

991212M2730801000
DEPARTMENT OF THE NAVY
NAVY COST INFORMATION SYSTEM
CIVILIAN MANPOWER BY PE BY MAJOR CLAIMANT BY RCC
NUMBERS IN UNITS

ADMIN AND ASSOC ACTIVITIES 9
SERVICE-WIDE SUPPORT 91212M
USMC 27

AS OF DATE 08 MAR 1982

			1981 NUMBRS	1982 NUMBRS	1983 NUMBRS	1984 NUMBRS	1985 NUMBRS	1986 NUMBRS	1987 NUMBRS
ADMIN AND ASSOC ACTIVITIES	9								
SERVICE-WIDE SUPPORT	91212M								
USMC	27								
CIVILIAN US DIRECT HIRE-	30801000		670	681	826	828	838	838	838
USMC	TOT	*	670	681	826	828	838	838	838
SERVICE-WIDE SUPPORT	TOT	**	670	681	826	828	838	838	838
SERVICE-WIDE SUPPORT	91212N								
CHIEF OF NAVAL OPERATIONS	11								
CIVILIAN US DIRECT HIRE-	30701000		425	468	467	467	467	467	467
CIVILIAN FGN DIRECT HIRE	30701010		30	33	33	33	33	33	33
CIVILIAN FGN INDIRECT HI	30702000		7	7	7	7	7	7	7
CHIEF OF NAVAL OPERATION	TOT	*	462	508	507	507	507	507	507
DEPUTY UNDER SECRETARY OF THE N	12								
CIVILIAN US DIRECT HIRE-	30701000		2501	2455	2498	2528	2527	2527	2527
CIVILIAN FGN DIRECT HIRE	30701010		5	5	5	5	5	5	5
DEPUTY UNDER SECRETARY O	TOT	*	2506	2460	2503	2533	2532	2532	2532
SERVICE-WIDE SUPPORT	TOT	**	2968	2968	3010	3040	3039	3039	3039
PUBLIC AFFAIRS	91214M								
USMC	27								
CIVILIAN US DIRECT HIRE-	30801000		2	3	3	3	3	3	3
USMC	TOT	*	2	3	3	3	3	3	3
PUBLIC AFFAIRS	TOT	**	2	3	3	3	3	3	3
PUBLIC AFFAIRS	91214N								
CHIEF OF NAVAL OPERATIONS	11								
CIVILIAN US DIRECT HIRE-	30701000		11	11	11	11	11	11	11
CHIEF OF NAVAL OPERATION	TOT	*	11	11	11	11	11	11	11
DEPUTY UNDER SECRETARY OF THE N	12								
CIVILIAN US DIRECT HIRE-	30701000		18	21	21	21	21	21	21
DEPUTY UNDER SECRETARY O	TOT	*	18	21	21	21	21	21	21

Table D-2

Example of PT04, Military Personnel by Program Element

P -PE - RCC4
9 91212M 3060
DEPARTMENT OF THE NAVY
NAVY COST INFORMATION SYSTEM
MILITARY PERSONNEL BY PROGRAM ELEMENT
NUMBERS IN UNITS DOLLARS IN THOUSANDS

PT04

ADMIN AND ASSOC ACTIVITIES 9

AS OF DATE 28 FEB 1982

		1982 NUMBRS	1982 DOLLRS	1983 NUMBRS	1983 DOLLRS	1984 NUMBRS	1984 DOLLRS	1985 NUMBRS	1985 DOLLRS	1986 NUMBRS	1986 DOLLRS	1987 NUMBRS	1987 DOLLR
ADMIN AND ASSOC ACTIVITIES 9													
SERVICE-WIDE SUPPORT 91212M													
MILITARY PERSONNEL MAR CORPS 3060													
ACTIVE MARINE CORPS OFFI	30601010	260	7658	256	8485	256	8486	255	8493	255	8494	255	849
ACTIVE MARINE CORPS ENLI	30601020	1151	13882	1044	14324	1044	14463	1044	14888	1044	14909	1044	1495
MILITARY PERSONNEL MAR C TOT	*	1411	21540	1300	22809	1300	22949	1299	23381	1299	23403	1299	2344
SERVICE-WIDE SUPPORT TOT	**	1411	21540	1300	22809	1300	22949	1299	23381	1299	23403	1299	2344
SERVICE-WIDE SUPPORT 91212N													
MILITARY PERSONNEL NAVY 3050													
ACTIVE NAVY OFFICERS	30501010	1193	37768	1185	41879	1187	42053	1194	42939	1194	43365	1195	4385
ACTIVE NAVY ENLISTED	30501020	601	8014	582	9072	596	9097	588	9305	577	9221	587	931
ACT DUT RES NAV OFF TAGR	30503010			2	82	2	80	2	84	2	88	2	8
ACT DUT RES NAV ENL TAGR	30503020			26	463	26	469	26	469	26	465	26	46
MILITARY PERSONNEL NAVY TOT	*	1794	45782	1795	51496	1811	51699	1810	52797	1799	53139	1810	5372
MILITARY PERSONNEL MAR CORPS 3060													
ACTIVE MARINE CORPS OFFI	30601010	153	4507	165	5469	165	5469	165	5496	165	5496	165	549
ACTIVE MARINE CORPS ENLI	30601020	108	1303	112	1537	112	1551	112	1598	112	1599	112	160
MILITARY PERSONNEL MAR C TOT	*	261	5810	277	7006	277	7020	277	7094	277	7095	277	7101
SERVICE-WIDE SUPPORT TOT	**	2055	51592	2072	58502	2088	58719	2087	59891	2076	60234	2087	60822
PUBLIC AFFAIRS 91214M													
MILITARY PERSONNEL MAR CORPS 3060													
ACTIVE MARINE CORPS OFFI	30601010	43	1267	43	1425	43	1425	43	1432	43	1432	43	143
ACTIVE MARINE CORPS ENLI	30601020	114	1375	114	1564	114	1579	114	1626	114	1628	114	163
MILITARY PERSONNEL MAR C TOT	*	157	2642	157	2989	157	3004	157	3058	157	3060	157	3064
PUBLIC AFFAIRS TOT	**	157	2642	157	2989	157	3004	157	3058	157	3060	157	3064
PUBLIC AFFAIRS 91214N													
MILITARY PERSONNEL NAVY 3050													
ACTIVE NAVY OFFICERS	30501010	44	1506	44	1546	44	1556	44	1584	44	1599	44	1614
ACTIVE NAVY ENLISTED	30501020	65	911	65	997	65	1001	65	1019	65	1033	65	104C
MILITARY PERSONNEL NAVY TOT	*	109	2417	109	2543	109	2557	109	2603	109	2632	109	2654
PUBLIC AFFAIRS TOT	**	109	2417	109	2543	109	2557	109	2603	109	2632	109	2654
PERSONNEL ADMINISTRATION 91220M													
MILITARY PERSONNEL MAR CORPS 3060													
ACTIVE MARINE CORPS OFFI	30601010	214	6304	225	7458	225	7458	225	7494	225	7495	225	749C

Table D-3

NCIS/FYDP Dictionaries

Dictionary Number	Dictionary Title	Description
8	Major Claimant Code	A two-digit code that identifies the bureau, command, or office having responsibility for administering funds.
10	Document Number Code	Identifies document that is source for justifying the change.
25	Resource Identification Code (RIC)	An eight-digit code that identifies the appropriation, force, or type of personnel.
28	Class Code	Groupings of similar resource category codes.
30	Resource Category Code (RCC)	An eight-digit code that identifies types of manpower, RDT&E projects, military construction projects, and procurements.
40	Category Stub	A five-digit code that represents cost categories to which appropriation data is related (e.g., forces are represented by "3AAAA").
45	Appropriation Code	An eight-digit code representing the appropriation level, budget activity level, or subhead/subbreak level.
70	Program Element Aggregation Code	A code representing program element aggregations used by the Operation and Maintenance, Navy (O&MN) and Operation and Maintenance, Navy Reserve (O&MNR).
71	Defense Planning and Programming Category Code	Code assigned program elements based on defense planning and programming guidance issued annually by the Office of the Secretary of Defense.
73	Sponsor Code	Lists all organizations that sponsor program elements.
74	Mission Budget Code	A three-digit code assigned all program elements that represent mission categories (e.g., strategic warfare and tactical warfare).
80	Program Element Code	A six-digit code representing accounting unit that receives funding from Congress.
85	Unit Descriptor Code (UDC)	A six-digit code that represents groupings of similar type UICs (e.g., ship type and aircraft squadrons).
90	Unit Identification Code (UIC)	An eight-digit code representing a specific organization unit of the Navy (e.g., ship, aircraft squadron, activity, and command).

Sample dictionary lists for the resource identification code (RIC), program element code (PEC), and unit descriptor code (UDC) are given in Tables D-4, D-5, and D-6 respectively. Other codes shown in these tables include the telecommunications indicator code (TIC), program element aggregation code (PAC), functional grouping code (FGC), operation sponsor code (OP SP), congressional budget product code (CBP), and user code. These codes are only of interest to special users.

(2) FYDP Master File. The FYDP master file contains ship, aircraft squadron, officer, enlisted, and civilian fiscal year end-strength counts and funding data from 1962 to the present. Also, it contains projected forces 8 years beyond the current year and funding and projected military and civilian end-strengths 5 years beyond the current year.

The FYDP master file has recently been expanded to support 50 years of data. The record format of the FYDP master file is given in Table D-7. The logical record length is 732 characters. A more complete explanation of the variables may be obtained from NARDAC.

A sample dump of FYDP master file is presented in Table D-8. The start of the first logical record is indicated on the dump. The year-begin, year-length, quantity, and amount variables are represented in binary and are thus not readable. Furthermore, because of the manner in which the dump was generated, the binary data in the dump are represented by fewer characters than is shown in the format description.

7. Classification. The NCIS/FYDP data base is classified SECRET. Extractions containing historical data are usually unclassified whereas extractions containing projected data are usually classified SECRET.

8. Update Frequency. The NCIS/FYDP data base is updated four times a year. The dictionaries are updated prior to every data base update.

9. Limitations/Problems. Data base users should be advised that negative quantities and multiple records (for a given set of accounting codes) exist because corrections and updates are performed by adding records with net changes (plus (+) or minus (-)) to the existing data base. Thus, when examining inventory counts or funding amounts for a specific set of accounting codes, it is necessary to sum the quantities recorded on multiple records.

10. Developmental Plans. An unclassified historical extraction of the FYDP master file and some dictionaries will be installed on IBM computers located at the Argonne National Laboratory computer facility in Chicago, Illinois. The files are being installed by NAVPERSRANDCEN (Code 11) for use as a data source for research projects.

Table D-4

Sample Resource Identification Code Dictionary List

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RESOURCE IDENTIFIER CODE DICTIONARY LIST

RIC	DICT ID	TCI	RESOURCE IDENTIFIER TITLE	CHANGE DATE	USER
0031	25		ACT DUT RES MC OFF (FD FM PPMC)	0776	F
0030	25		ACT DUT RES NAV OFF (FD FM RPN)	0177	F
0133	25		ACT MAR CORPS ENL STUDENT-MEMO	1173	F
0137	25		ACT MAR CORPS ENL TRNING.-MEMO	1173	F
0043	25		ACT MAR CORPS OFF STUDENT-MEMO	1173	F
0132	25		ACT NAVY ENL STUDENTS (MEMO)	1173	F
0136	25		ACT NAVY ENL TRAINEES (MEMO)	1173	F
0042	25		ACT NAVY OFF STUDENTS (MEMO)	1173	F
0103	25	T	ACTIVE MARINE CORPS ENLISTED	1074	F
0003	25	T	ACTIVE MARINE CORPS OFFICERS	1074	F
0102	25	T	ACTIVE NAVY ENLISTED	1074	F
0002	25	T	ACTIVE NAVY OFFICERS	1074	F
1600	25		AD DESTROYER TENDERS	0276	F
1601	25		AD 14 DIXIE CLASS	0276	F
1602	25		AD 26 SHENANDOAH CLASS	0276	F
1603	25		AD 37 SAMUEL GOMPERS CLASS	0276	F
1604	25		AD 41 CLASS	0476	F
1080	25		ADG DEGAUSSING SHIPS (H)	0774	F
1620	25		AE AMMUNITION SHIPS (H)	0476	F
1625	25		AE 21 SURIBACHI CLASS	0276	F
1626	25		AE 23 NITRO CLASS	0276	F
1627	25		AE 26 KILAUEA CLASS	0276	F
1640	25		AF STORE SHIPS (H)	0476	F
1724	25		AF STORE SHIPS-MEDIUM (H)	0476	F
1725	25		AF STORE SHIPS-SMALL (H)	0476	F
1641	25		AF 56 DENEBOLA CLASS	0276	F
1642	25		AF 58 RIGEL CLASS	0276	F
1650	25		AFS COMBAT STORE SHIPS (H)	0476	F
1651	25		AFS 1 MARS CLASS	0276	F
4000	25		AF-1 (H)	0276	F
4001	25		AF-9 (H)	0276	F
1738	25		AG MISC AUX (H)	0476	F
1960	25		AG MISC AUXILIARIES (H)	0476	F
1961	25		AG 153 COMPASS ISLAND CLASS	0276	F
1962	25		AG 164 KINGSPORT CLASS	0276	F
1963	25		AG 520 ALACRITY CLASS	0276	F
1073	25		AGB AUXILIARY ICEBREAKERS (H)	1075	F
1039	25		AGDE ESCORT RESEARCH SHIPS (H)	0476	F
1800	25		AGDS AUX DEEP SUBVER SUPPSHIP (H)	0776	F
1801	25		AGDS 2 POINT LOMA CLASS	0276	F
1810	25		AGEH HYDROFOIL RESEARCH SHIPS	0276	F
1811	25		AGEH 1 PLAINVIEW CLASS	0276	F
2286	25		AGER ENVIRONMENTAL RES SHIPS (H)	0776	F
1820	25		AGF FLEET TAC COMMAND SHIPS(H)	0476	F
1821	25		AGF 3 LA SALLE CLASS	0276	F

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Table D-5

Sample Program Element Dictionary List

PROGRAM ELEMENT DICTIONARY LIST

ELEMENT	DICT ID	PAC	F G C	OP SP	CBP	TIC	PROGRAM ELEMENT TITLE	CHANGE DATE	USER
12215N	80		AB	098			ABM SUPPORT (H)	0776	
63796N	80		CKG	098			ABN ELEC-MAG/OPT SYS	0776	
25663N	80		BEB	098			ACFT FLIGHT TEST GENERAL	0776	
64215N	80		CKG	098			ACFT HANDLING/SERVICING EQ	0776	
64220N	80		CKG	098			ACFT IR SIGNATURE SUPPRESSION	0776	
25619N	80		BEB	098			ACFT LAUNCH/RETRE FLT SUPP (H)	0776	
25662N	80		BEB	098			ACFT PROPULSION EVAL GENERAL	0776	
64252N	80		BEB	098			ACFT PROPULSION (H)	0776	
25616N	80		BEB	098			ACFT SYS FLEET SUPPORT (H)	0776	
63503N	80		CKG	098			ACOUSTIC COMMUNICATIONS (ADV)	0177	
64556N	80		CKG	098			ACOUSTIC COMMUNICATIONS (ENG)	0177	
63259N	80		CKG	098			ACOUSTIC SEARCH SENSORS (ADV)	0776	
64261N	80		CKG	098			ACOUSTIC SEARCH SENSORS (ENG)	0776	
90000N	80		DUM				ADMIN.AND ASSOC ACTIVITIES.	0776	
63303N	80		CKG	098			ADV ARM SYS TECH	0776	
63610N	80		CKG	098			ADV ASW TORPEDO	0776	
63305N	80		BEB	098			ADV A/L AAM SYS (AGILE)	0776	
63306N	80		CKG	098			ADV A/L ASM SYS	0776	
63604N	80		CKG	098			ADV BW/CW WEAPONS (H)	0776	
63580N	80		CKG	098			ADV DESIGN SUB NUCLEAR PROP	0776	
63742N	80		CKG	098			ADV ELECT DEVICES DEV	0776	
63712N	80		CKG	098			ADV ELEX COMPONENTS	0776	
63612N	80		CKG	098			ADV EXPLOSIVES TECHNOLOGY	0876	
63307N	80		CKG	098			ADV FUZE DESIGN	0776	
63515N	80		CKG	098			ADV IDENTIFICATION TECH	0776	
63709N	80		CKG	098			ADV MARINE BIOLOGICAL SYS	0776	
63606M	80		CKH	CMC			ADV MC WPNS SYS	0776	
63655N	80		CKG	098			ADV NAVAL GUN SYS (H)	0177	
63518N	80		CKG	098			ADV NAVIGATION DEV	0776	
63258N	80		CKG	098			ADV PROPULSION FOR V/STOL	0776	
64225N	80		CKG	098			ADV RADAR WARNING SYSTEM	1076	
64226N	80		CKG	098			ADV SELF-PROTECTION SYSTEM	1076	
63522N	80		CKG	098			ADV SUB SURVEILLANCE EQUIP PRO	0776	
35125N	80	030510	CJ	094		T	ADV SUPPORT COMMUNICATIONS	0776	
63510N	80		BFD	098			ADV SURFACE CRAFT (H)	0776	
63505N	80		CKG	098			ADV SURFACE SHIP SONAR DEV (H)	0776	
63304N	80		BFD	098			ADV SURFACE-TO-AIR WPNS SYS	0776	
63519N	80		CKG	098			ADVANCED COMMAND DATA SYSTEMS	0776	
63520N	80		CKG	098		T	ADVANCED COMMUNICATIONS	0776	
63605N	80		CKG	098			ADVANCED CONVENTIONAL ORDNANCE	0776	
63705N	80		CKG	098			ADVANCED LOGISTICS	0776	
63502N	80		CKG	098			ADVANCED MINE COUNTERMEASURES	0776	
81712N	80	081000	EUV	01			ADVERTISING ACTIVITIES	0776	
81712M	80		EUW	CMC			ADVERTISING ACTIVITIES	0776	
64303N	80		BFD	098			AEGIS	0776	

Table D-6

Sample Unit Descriptor Dictionary List

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UNIT DESCRIPTOR DICTIONARY LIST

UDC	DICT ID	UNIT DESCRIPTOR TITLE	CHANGE DATE	USER
160000	85	AD DESTROYER TENDERS	1076	
160400	85	AD 41 CLASS	1076	
120100	85	ADG		F
162000	85	AE AMMUNITION SHIPS	0776	F
164000	85	AF STORE SHIPS	0776	F
165000	85	AFS COMBAT STORE SHIPS	0776	F
196000	85	AG MISC AUXILIARIES	0776	F
110200	85	AGS		F
060100	85	AGDE		F
180000	85	AGDS AUX DEEP SUBMER E SUPPORT SHIPS	0776	F
181000	85	AGEH HYDROFOIL RESEARCH SHIPS	0776	F
122600	85	AGER		F
182000	85	AGF FLEET TACTICAL COMMAND SHIPS	0776	F
183000	85	AGFF FRIGATE RESEARC SHIPS	0776	F
185000	85	AGHS PATROL COMBATANT SUPP SHIP	1076	F
184000	85	AGM MISSILE RANGE SUPPORT SHIPS	0776	F
110300	85	AGMR		F
188000	85	AGOR OCEANOGRAPHIC RESEARCH SHIPS	0776	F
189000	85	AGOS AUXILIARY SHIPS	0776	F
190000	85	AGP PATROL CRAFT TENDER	0776	F
070100	85	AGR		F
194000	85	AGS SURVEYING SHIPS	0776	F
120500	85	AGSC		F
122400	85	AGSL		F
193000	85	AGSS AUXILIARY SUBMARINES	0776	F
120600	85	AGSS (R+D)		F
350100	85	AGTR		F
130400	85	AH		F
201500	85	AK CARGO SHIPS	0177	
980250	85	AK (FBM) T-AK (FBM)		F
040000	85	AKD/T-AKD		F
120700	85	AKL/T-AKL		F
200000	85	AKM MULTIPURPOSE CARGO SHIPS	0776	F
203000	85	AKR VEHICLE CARGO SHIPS	0776	F
190400	85	AKS		F
120800	85	ANL		F
205000	85	AO OILER	0776	F
205900	85	AO * NEW CLASS	1076	F
205800	85	AO 177 CLASS	1076	
208000	85	AOE FAST COMBAT SUPPORT SHIPS	0776	F
208100	85	AOE 80A CLASS	1076	F
209000	85	AOG GASOLINE TANKER	0776	F
209200	85	AOG 81 ALATNA CLASS	0177	F
100700	85	AOR		F
210000	85	AOR FLEET REPLENISHMENT OILER	0776	F

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Table D-7

Format of FYDP Master File

Data Elements	Length	Start
Record location (always $; indicates start of logical record)	1	1
Record identification (data records are always 1)	1	2
Program element	6	3
Filler	2	9
Record type-primary (indicates type of data (e.g., forces, R&D, manpower))	2	11
Resource identification code-primary (identifies appropriation, force, or type of personnel)	4	13
Record type-secondary (used to indicate that record contains both manpower and operating data)	2	17
Resource identification code-secondary (reports specific source of funding)	4	19
Unit descriptor code (represents groupings of similar type (FUICs)	6	23
Unit identification code (FUIC)	8	29
Unit identification code-MC (not used)	2	37
Appropriation number (links data to budget activity level)	8	39
Budget classification code (contains cost categories to which appropriation data is related)	5	47
Resource category code (identifies types of manpower, RDT&E projects, etc.)	8	52
Weapon system code (identifies weapon systems)	8	60
Major claimant	2	68
Non-add status (indicates program element determined in nonstandard manner)	1	70
High level key (indicates data only at program element level not at FUIC level)	1	71
First fiscal year index (indicates starting year of data (e.g., FY62 = 1, FY63 = 2))	2	72
Last fiscal year index (indicates ending year of data)	2	74
Class code (classifies resources)	2	76
Functional review code (used in special report generation)	4	78
Document type (indicates type of document where OSD change originated)	2	82
Document code (not used)	6	84
Document date (not used)	6	90
Fiscal guidance code (used with OSD program element groupings)	6	96
Year month change (date where record changed during update)	4	102
Cycle date (date of update, YYMMDD)	6	106
Filler	8	112
Record sequence number (not always used)	6	120
Filler	1	126
Year-begin (index indicating first year of quantity/amount data)	3	127
Year-length (indicates number of years of data)	3	130
Quantity[a] (ship, aircraft, manpower counts)	600	133
Amount[a] (funding in dollars)		

[a]The file allows for 50 years of quantity and amount data beginning with FY 1962 and extending to FY 2010. The transition quarter is included. Quantity and amount are each represented by 6 characters and are stored as a pair for each year.

Table D-8

Sample Dump of FYDP Master File

APPENDIX E

NAVY MANPOWER PLANNING SYSTEM (NAMPS)

NAVY MANPOWER PLANNING SYSTEM (NAMPS)

1. Background. The Navy manpower planning system (NAMPS) is a management information system designed to provide manpower managers with data required to support the Planning, Programming, and Budgeting System (PPBS), the Program Objective Memorandum (POM) process, and other manpower planning efforts. The information contained in NAMPS includes current and projected manpower requirements and authorizations by unit identification code (UIC), grade, skill area, and other groupings.

The development of NAMPS began in 1975 and has continued in phases. The initial version of NAMPS, known as mini-NAMPS, was developed by B-K Dynamics and was first employed during POM-77. The second phase, Interim NAMPS, also developed by B-K Dynamics, was used during POM-83. Today, Interim NAMPS is referred to simply as NAMPS. In this paper, it will be termed as batch-mode NAMPS. More recently, Advanced Technology Incorporated (ADTECH) has developed interactive software, the executive subsystem (EXSS), which allows users to generate reports and update the data base in real time.

Today, two versions of NAMPS are employed. The batch-mode NAMPS is used for generating detailed reports that are required on a routine basis. Interactive NAMPS, referred to as EXSS, is used to answer specialized questions that require rapid turnaround and other questions of an exploratory nature. In this document, emphasis is placed on the description of batch-mode NAMPS.

2. Purpose/Applications. Initially, the primary purpose of NAMPS was to provide information needed by manpower decision makers to support the POM process. POM-related uses of the NAMPS system include the following:

a. To assess and defend manpower programming decisions.

b. To furnish information in support of PPBS.

c. To prepare and evaluate changes in manpower programs resulting from the Navy's changing missions, tasks, or operational capabilities.

d. To identify imbalances that may exist between projected manpower requirements and projected personnel inventories.

e. To provide information needed by resource sponsors.

NAMPS is also used to construct the Navy's 17-year manpower requirements projections by combining data from various input sources.

3. System Description. NAMPS is essentially a data collection system that combines manpower requirements, authorization, and inventory data from a number of sources to create a data base containing active duty military and civilian manpower forecasts at the activity level. Currently, NAMPS contains both military and civilian requirements and authorizations forecasts for the current year and 16 projected years. However, authorizations are held constant for the final 10 years of the data base. NAMPS has the capability of generating many reports that contain requirements and authorizations at different levels of aggregation. Batch and interactive NAMPS routines are written in COBOL.

a. Input Sources. The primary sources of input data for the batch-mode NAMPS are listed and briefly described below. The record descriptions for these data sources are listed in documentation prepared by the Navy Manpower and Material Analysis Center Pacific (NAVMMACPAC) (1981).

(1) Navy manpower requirements data base (NMRDB)--Requirements by UIC, skill classification, ratings, and other categories (for the current year for existing activities).

(2) Navy manpower data accounting systems (NMDAS)--Manpower authorizations and undocumented (proxy) requirements by UIC, rating, claimant, and other categories.

(3) Navy resource model (NARM)--Principal source of information for the resource allocation display (RAD), which is one of the key supporting documents in the POM.

(4) HARDMAN information system (HIS)/manpower requirements projection subsystem (MREPS)--Billet information by UIC, HARDMAN codes, and other categories for current year and 16 projected years for new weapon systems/platforms. Includes effective begin and end dates.

(5) Billet cost model (BCM)--Costs of manning billets with people who possess the requisite skills. Includes officer and enlisted personnel.

(6) Manpower quality collection forms (MQCF)--Qualitized manpower change data (rating/pay grade) by claimant, UIC, start and stop year, and other categories as a result of the POM.

(7) Bunk constraints--Actual bunk constraints by ship UIC.

(8) Reference and coversion files--Contains data needed for validation of input data.

The data input to interactive NAMPS is contained in an extraction provided by batch-mode NAMPS. No cost information is included.

b. Subsystems. NAMPS currently consists of seven subsystems: the executive subsystem (EXSS), which makes up the interactive NAMPS, and six that pertain only to the batch-mode system. These subsystems are described below. Major portions of these descriptions have been extracted from documentation prepared by the Deputy Chief of Naval Operations, Personnel, and Training (1980).

(1) Executive Subsystem (EXSS). This subsystem provides an interactive interface between the user and selected NAMPS data files, with a command language for the user to communicate with and invoke the various EXSS modules as needed. EXSS will also insulate the user from housekeeping chores and from changes to the other subsystems. By responding to selection criteria, the user can easily ascertain status, perform problem solving, or execute data manipulation routines. EXSS has the responsibility for ascertaining the user's identity and the authorized level of clearance and access. EXSS can handle both input and output to the EXSS files.

(2) Projected Manpower Requirements Subsystem (PMRS). This subsystem is for internalizing and keeping track of all incoming data files (except those specifically

assigned to other subsystems). It is responsible for accepting input data from external systems, hiding the details of formatting, converting the data to a representation that is internally compatible with NAMPS, and storing the data in an efficient and easily retrievable form (i.e., building master data sets). PMRS also contains modules required to extend manpower sets to encompass all relevant manpower data.

(3) Aggregation Subsystem (AGSS). This subsystem performs three basic functions: extraction, aggregation, and merging. By using control parameters, the user may extract, aggregate, and merge user-specified fields from data sets built by PMRS. The output file may contain a selected set of increments/decrements from the delta subsystem (see below) and may be used as input to the cost subsystem, the comparator subsystem, or others.

(4) Delta Subsystem (DELS). This subsystem collects and organizes changes to the manpower data sets and receives program changes for later examination and analysis. Increments and decrements to manpower programs are processed during the POM formulation and execution phases. DELS captures and applies these manpower changes and allows manpower analysts to view individual manpower increments or decrements in various display formats (e.g., by military or civilian quality segments within unit or aggregated over several units within a PE). Manpower program increments/decrements defined by the resource sponsor during the POM are applied to a data base when approved.

(5) Cost Subsystem (COSS). This subsystem is designed to apply cost factors to given manpower suites and to support tradeoff analysis within the comparator subsystem. COSS is designed to incorporate existing cost model data sets and apply these to manpower data of interest to the decision maker. It supports the functions of determining budgetary or economic costs of a selected file of Navy manpower requirements, calculating the cost of a given requirements plan or subset or applying NARM cost factors as a basis for comparison.

(6) Comparator Subsystem (COMS). This subsystem allows any two like-formatted manpower data sets to be compared and will generate a new data set representing the differences between the original inputs. Inventory data from PMRS may be introduced into COMS for display in conjunction with manpower data into rating/pay grade segment detail and can apportion Navy-wide aggregated data to individual manpower sponsors to support the SPP input phase and POM end-game analysis.

(7) Mission Support Subsystem (MISS). This subsystem will associate the force unit manpower increments and/or decrements with previously specified functions and tasks in the support establishment, and will account for the indirect manpower effects of decisions and tentative decisions. Since increments or decrements to force units and other activities cause not only direct manpower differences but also workload changes in the related support areas, the determination of real manpower costs of competing program alternatives requires modeling of these secondary and tertiary effects.

4. Manager/Contacts.

a. Manager (ADP):

CDR Al Humphreys
Naval Military Personnel Command (1642)
Arlington Annex, Room 2811
Washington, DC 20370
Autovon: 224-5586, Commercial: (202) 694-5586.

b. Contact for Authorizations:

Mr. Bill Gerade
Chief of Naval Operations (OP-122E)
Arlington Annex, Room 2810
Washington, DC 20370
Autovon: 224-5307, Commercial: (202) 694-5307.

c. Contact for Requirements:

Mr. Kenneth Lobenstein
Chief of Naval Operations (OP-11G)
Arlington Annex, Room G831
Washington, DC 20370
Autovon: 224-1707, Commercial: (202) 694-1707.

5. Resident Computer. The batch-version of NAMPS resides on a secure IBM 3033 located at the Applied Physics Laboratory at Johns Hopkins University. The interactive version of NAMPS resides on a secure Perkin Elmer 3220 located at the Navy Annex.

6. Data.

a. Reports.[1] More than 60 hard copy reports may be generated on an overnight basis from batch-mode NAMPS. The major reports contain requirements and authorizations by activity at various levels of aggregation. Several reports are listed and described below:

(1) NAMPS Activity Index Report--Lists the major activity elements that apply to an activity. These elements include various UICs, MARP code, sea-shore code, activity begin and end dates, and other information contained in the activity index record (AI) file.

(2) NAMPS Authorization Report--Lists of officer, enlisted, and civilian authorizations for the current fiscal year and 5 projected years (CFY, FY1-FY5). Data are displayed by rating, designator code, and pay grade.

(3) NAMPS FYDP Report--Lists officer and enlisted FYDP (budgeted maximum end-strength) requirements data by program element, AUIC, activity name, and other codes for the current fiscal year and 6 projected years (CFY, FY1-FY6).

(4) NAMPS Manpower Requirement Report--Lists officer, enlisted, and civilian requirements by AUIC and activity name for the current fiscal year and 6 projected years (CFY, FY1-FY6).

(5) NAMPS Comparison Report--Lists billets authorized, requirements, FYDP requirements by resource sponsor, program element, AUIC, and activity name for the current fiscal year and 6 projected years (CFY, FY1-FY6).

Table E-1 is a sample NAMPS report that shows projected officer and enlisted requirements for several activities.

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[1]Portions of this section has been extracted from documentation prepared by Akman Associates, Inc. (1980).

Table E-1

Sample NAMPS Report Format

NAMPS PCH-82 MANPOWER DISPLAY

SPON	PE NO	UIC	ACTIVITY #	ACTIVITY NAME	CLA	TYPE

LINE	CONTENTS	FY80	FY81	FY82	FY83	FY84	FY85	FY86
		OFFICER/ENLISTED COUNTS						
02	24281N 05059 0697059600 SSN 596 BARB			7080 SHIP				
	SMD/SQMD	12/114	12/114	12/114	12/114	12/114	12/114	12/114
	BC/SMD	12/94	12/94	12/94	12/94	12/94	12/94	12/94
	JAN FYDP	13/121	13/121	13/111	13/113	13/113	13/113	13/113
	FYDP (/) SMD %	108% / 106%	108% / 106%	108% / 97%	108% / 99%	108% / 99%	108% / 99%	108% / 99%
	FYDP (/) BCSMD %	108% / 128%	108% / 128%	108% / 118%	108% / 120%	108% / 120%	108% / 120%	108% / 120%
	BFM/MAS	23/131	22/130	21/119	20/120	19/119	18/118	17/117
	SPP ACTION	0/0	0/0	0/0	0/0	0/-2	0/-2	0/-2
	NEW FYDP	13/121	13/121	13/111	13/113	13/111	13/111	13/111
	NEWFYDP (/) SMD %	108% / 106%	108% / 106%	108% / 97%	108% / 99%	108% / 97%	108% / 97%	108% / 97%
	NEWFYDP (/) BCSMD %	108% / 128%	108% / 128%	108% / 118%	108% / 120%	108% / 118%	108% / 118%	108% / 118%
02	24281N 05060 0697059700 SSN 597 TULLIBEE			6080 SHIP				
	SMD/SQMD	10/82	10/82	10/82	10/82	10/82	10/82	10/82
	BC/SMD	12/94	12/94	12/94	12/94	12/94	12/94	0/0
	JAN FYDP	11/92	10/82	10/82	11/82	11/82	0/0	0/0
	FYDP (/) SMD %	110% / 112%	100% / 100%	100% / 100%	110% / 100%	110% / 100%	0% / 0%	0% / 0%
	FYDP (/) BCSMD %	91% / 97%	83% / 87%	83% / 87%	91% / 87%	91% / 87%	0% / 0%	0% / 0%
	BFM/MAS	21/102	19/91	18/90	18/89	17/88	5/5	4/4
	SPP ACTION	0/0	0/0	0/0	0/0	0/0	11/82	0/0
	NEW FYDP	11/92	10/82	10/82	11/82	11/82	11/82	0/0
	NEWFYDP (/) SMD %	110% / 112%	100% / 100%	100% / 100%	110% / 100%	110% / 100%	110% / 100%	0% / 0%
	NEWFYDP (/) BCSMD %	91% / 97%	83% / 87%	83% / 87%	91% / 87%	91% / 87%	91% / 87%	0% / 0%
02	11221N 05061 0706061900 SSBN 619 ANDREW JACKSON			6080 SHIP				
	SMD/SQMD	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	BC/SMD	26/252	26/252	26/252	26/252	26/252	26/252	26/252
	JAN FYDP	24/258	24/258	26/258	26/262	26/258	26/260	26/260
	FYDP (/) SMD %	0% / 0%	0% / 0%	0% / 0%	0% / 0%	0% / 0%	0% / 0%	0% / 0%
	FYDP (/) BCSMD %	92% / 102%	92% / 102%	100% / 102%	100% / 103%	100% / 102%	100% / 103%	100% / 103%
	BFM/MAS	34/268	33/267	34/266	33/269	32/264	31/265	30/264
	SPP ACTION	0/0	0/0	-2/0	-12/-4	-2/0	-2/-2	0/-2
	NEW FYDP	24/258	24/258	24/258	14/258	24/258	24/258	26/258
	NEWFYDP (/) SMD %	0% / 0%	0% / 0%	0% / 0%	0% / 0%	0% / 0%	0% / 0%	0% / 0%
	NEWFYDP (/) BCSMD %	92% / 102%	92% / 102%	92% / 102%	53% / 102%	92% / 102%	92% / 102%	100% / 102%
02	11221N 05062 0706062000 SSBN 620 JOHN ADAMS			6080 SHIP				
	SMD/SQMD	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	BC/SMD	26/252	26/252	26/252	26/252	26/252	26/252	26/252
	JAN FYDP	24/258	24/258	26/258	26/262	26/258	26/260	26/260
	FYDP (/) SMD %	0% / 0%	0% / 0%	0% / 0%	0% / 0%	0% / 0%	0% / 0%	0% / 0%
	FYDP (/) BCSMD %	92% / 102%	92% / 102%	100% / 102%	100% / 103%	100% / 102%	100% / 103%	100% / 103%
	BFM/MAS	34/268	33/267	34/266	33/269	32/264	31/265	30/264
	SPP ACTION	0/0	0/0	-2/0	-2/-4	-2/0	-14/-12	0/-2
	NEW FYDP	24/258	24/258	24/258	24/258	24/258	12/139	26/258
	NEWFYDP (/) SMD %	0% / 0%	0% / 0%	0% / 0%	0% / 0%	0% / 0%	0% / 0%	0% / 0%
	NEWFYDP (/) BCSMD %	92% / 102%	92% / 102%	92% / 102%	92% / 102%	92% / 102%	46% / 55%	100% / 102%

Interactive NAMPS has the capability of generating hard-copy reports by means of a report selection menu that is displayed on computer terminals. Fewer reports are available interactively. The interactive reports tend to be more of an investigative nature, whereas the routine bulk data processing reports are generated from batch-mode NAMPS.

b. Files. The most important files contained in the batch-mode NAMPS are the internal billet record (IBR) file, and the activity index record (AI) file. An IBR file contains projected officer, enlisted, and civilian manpower quantities by activity, skill type, NOBC/NEC, pay grade, and other groupings. Three files are maintained in a common format: the authorization, requirement, and FYDP files. Table E-2 is a record layout of an IBR record. Table E-3 is a sample dump of several records of the internal billet record (requirement) file. It should be noted that the delete-field, position 1, and the fields in positions 147-228 are blank. The fiscal year quantities are blank because they are represented in binary. This file contains unconstrained manpower requirements.

The A1 file consists of one record for each activity and includes UICs, activity long name, program element, NARM codes, effective begin and end date, and the HARDMAN type code. Table E-4 is a record layout of the A1 record. Table E-5 is a sample dump of several A1 records. (The delete-field, position 1, is blank). The definition for many of the variables in Tables E-2 and E-4 may be found in documentation prepared by NAVMMACPAC (1981) and NMPC-165 (1973). Others may be determined by contacting OP-122E.

The data base for interactive NAMPS contains similar information.

7. Classification. Files associated with HARDMAN requirements are classified SECRET. Other files containing projections may be classified as CONFIDENTIAL or SECRET, depending on the level of detail and data elements displayed.

8. Update Frequency. The NAMPS data base is updated three times annually.

9. Limitations/Problems. Limitations exist in the NAMPS data base because of deficiencies in input data. These limitations are listed below:

a. For shore activities that are not covered by staffing standards, billets authorized from the NMDAS system are used as a proxy for requirements.

b. Contractor and civilian federal employee data are aggregated and measured in terms of federal employees.

c. The requirements associated with the introduction of new platforms and equipment, which are introduced by the HARDMAN system, do not include indirect support requirements (e.g., administration and medical) unless these requirements are addressed in the Navy training plan.

d. Changes in projected shore requirements (from FY1 to FY16) are due primarily to HARDMAN increments and decrements associated with the introduction, modification, and replacement of equipment. Shore requirements should also be driven by ship and aircraft inventories and operating tempos.

e. Civilian forecasts only cover the time frame of the FYDP.

10. Developmental Plans. The DELS subsystem will be automated so that major claimants and sponsors can input data directly to NAMPS through computer terminals.

Table E-2

Internal Billet Record (IBR) Format

Positions	Field Description	Alpha/Numeric
1	HARDMAN activity type code (requirements only)	A/N
2-6	AUIC	A/N
7-11	Record-sequence-code	N
12-16	PUIC	A/N
17-21	FUIC	A/N
22-31	Activity-code-ten-digit	A/N
32-35	MARP-code	A/N
36-37	AODC	A/N
38	Sea-shore-code	A/N
39	Activity-type-code	A/N
40-47	Geographic-location	A/N
48-50	Wage-board-location	A/N
51-56	Program-element-code	A/N
57-62	NARM-program-element-code	A/N
63-67	Defense-plan-program-code	A/N
68-72	Budget-class-code	A/N
73-75	Resource-sponsor-code	A/N
76-78	NARM-resource-sponsor-code	A/N
79-80	Claimant-code	A/N
81-82	Sub-claimant-code	A/N
83-87	Task-area-code	A/N
88	Data-source-code	A/N
89-90	Priority-manning	A/N
91	Selected-reserve-indicator	A/N
92	Standards-code	A/N
93-95	Billet-occupation-code	A/N
96	Skill-type	A/N
97-101	Skill-category	A/N
102-105	Pay-grade	A/N
106-109	PNOBC-PNEC	A/N
110-113	SNOBC-SNEC	A/N

Table E-2 (Continued)

Positions	Field Description	Alpha/Numeric
114	Either-or-code	A/N
115-119	Alt-skill-category	A/N
120-123	Alt-pay-grade	A/N
124-127	Alt-PNOBC-PNEC	A/N
128-131	Alt-SNOBC-SNEC	A/N
132-134	CFY-date	N
135-139	HARDMAN-weapon-system-ID-code	A/N
140-141	HARDMAN-date-source-code	A/N
142-144	HARDMAN-manpower-category-code	A/N
145	HARDMAN-type-code	A/N
146-147	Function-area-code	A/N
148	Manning-control-authority	A/N
149-152	Rate-code	A/N
153-157	Rate-conversion	A/N
158-160	Slack-BYTE	N
161-164	CFY	N
165-168	FY1	N
169-172	FY2	N
173-176	FY3	N
177-180	FY4	N
181-184	FY5	N
185-188	FY6	N
189-192	FY7	N
193-196	FY8	N
197-200	FY9	N
201-204	FY10	N
205-208	FY11	N
209-212	FY12	N
213-216	FY13	N
217-220	FY14	N
221-224	FY15	N
225-228	FY16	N

Table E-3

Sample Dump of Internal Billet Records

```
                    RECORD NUMBER   1

0001100163000C110C0114575C075002012C21C0211C1CC   92398N92398NSSSN   09B09B11A0ADMIN2   99 C1000
  02974C     0                        082               B

                    RECORD NUMBER   2

000110016200011000114575CC75002012C2100211C100   92398N92398NSSSN   09B09B11A0ADMIN2   CB C1CC0
  029740     0                        082               B

                    RECORD NUMBER   3

0001100161 0CC1100C0114575C075002012C21C0211C1CC   92398N92398NSSSN   09B09B11A0ADMIN2   CB C1000
  029680     0                        082             N B

                    RECORD NUMBER   4

0C011001600CC11000114575C075002C12C21C0211C100   92398N92398NSSSN   09B09B11ACADMIN2   QB C1000
  C22605     0                        082               B

                    RECORD NUMBER   5

000110015900011000114575CC75C02012C21002110100   92398N92398NSSSN   09B09B11A0ADMIN2   QB C1000
  039942     0                        082               B

                    RECORD NUMBER   6

00011001580CC110001145750C75C02012C2100211C100   92398N92398NSSSN   09B09B11A0ADMIN2   CB C1000
  03993599600                         082               B

                    RECORD NUMBER   7

00C1100157CCC11000114575C075C02012C21C0211C100   92398N92398NSSSN   09B09B11A0ADMIN2   CB C1000
  03993526050                         082               B

                    RECORD NUMBER   8

0CC11001560CC11000114575CC75C02C12C21002110100   92398N92398NSSSN   09BC9B11A0ADMIN2   QB C1000
  C39740     0                        082             C B

                    RECORD NUMBER   9

00011001550001100C0114575CC75002C12C2100211C100   92398N92398NSSSN   09B09B11A0ADMIN2   VE C1000
  03972039430                         082               B
```

Table E-4

Activity Index Record Format

Positions	Field Description	Alpha/Numeric
1	Delete-field	A/N
2-6	AUIC	A/N
7-11	PUIC	A/N
12-16	FUIC	A/N
17-26	Activity-code-ten-digit	A/N
27-30	MARP-code	A/N
31-60	Activity-long-name	A/N
61-62	Activity-designator-code	A/N
63	Sea-shore-code	A/N
64	Activity-type-code	A/N
65-72	Geographic-location	A/N
73-75	Wage-board-location	A/N
76-81	Program-element-code	A/N
82-87	NARM-program-element-code	A/N
88-92	Defense-plan-PGM-code	A/N
93-97	Budget-class-code	A/N
98-100	Resource-sponsor-code	A/N
101-103	NARM-resource-sponsor-code	A/N
104-105	Claimant-code	A/N
106-107	Sub-claimant-code	A/N
108-112	Task-area-code	A/N
113-115	Effective-begin-date	N
116-118	Effective-end-date	N
119	HARDMAN-type-code	A/N

Table E-5

Sample Dump of Activity Index Records

```
                                          RECORD NUMBER    1
000110001100011457500750020120PNAV                             C21002110100    92398N92398NSSSN     09B09B11A0ADMIN0650990

                                          RECORD NUMBER    2
00012328670001257440010102011OFF OF COMPTROLLER                C21002110100    92398N92398NSSSN     09B09B12A0ADMIN0650990

                                          RECORD NUMBER    3
000130001300013301404450020l3NAVY JAG ALEXANDRIA VA            D31002110100    92398N92398NSSSN     09B09B12A0ADMIN0650990

                                          RECORD NUMBER    4
00014000140001455800720002021OFF NAV RESCH WASH                D31002110100    65898N65898NSSSN     09809814A9RD    0650990

                                          RECORD NUMBER    5
000150001500015367800100020l7COMNAVINTCOM WASH DC              D31002111520    31398N31398NSSCN     00900915A0INT   0650990

                                          RECORD NUMBER    6
00016328670001657440010358061OFF OF NAVPETOILSHALE RES         C2 002110100    91519N91519NFASN     09B09B02A8ADMIN0650990

                                          RECORD NUMBER    7
000180001800018199200500020188UMED NAVY DEPT                   D31002110010    87798N87798NSSSN     93 93 18A0MED   0650990

                                          RECORD NUMBER    8
0001900019000193359002000 2027NAVAIRSYSCOMHQ WASH DC           D21002110100    72898N72898NSSSN     04 04 37K0LOGGS0650990

                                          RECORD NUMBER    9
000200002000020213500080020 28NAVACCTGFINCEN WASHINGTON        D31002110100    92498N92498NSSSN     09B09B12A0ADMIN0650990

                                          RECORD NUMBER   10
000220002200022200000500020l8NAVMILPERSCOMSUPP WASH DC         C21002110100    92498N92498VSSSN     09B01 22A0ADMIN0650990
```

APPENDIX F

ENLISTED DISTRIBUTION PROJECTION SYSTEM/UNCLASSIFIED BILLETS BODY FILE (EDPROJ/UBIBO)

ENLISTED DISTRIBUTION PROJECTION SYSTEM/UNCLASSIFIED BILLETS BODY FILE (EDPROJ/UBIBO)

1. Background. The enlisted distribution projection system (EDPROJ) was developed in 1974 by the Navy Military Personnel Command (NMPC-472) to provide support to detailers and to personnel managers involved in the distribution process. Today it is managed and maintained by NMPC-472. EDPROJ is used to perform the projection, allocation, and fleet balancing functions of the distribution process. It produces projection, balancing, statistical summary, and other reports that assist distribution management. A byproduct of EDPROJ is the unclassified billets body file (UBIBO), which serves as a data source for many ad hoc reports.

2. Purpose/Applications. The purposes of EDPROJ are:

a. To provide detailers with information required for the fleet balancing function.

b. To provide the Enlisted Personnel Management Center (EPMAC) input to the Navy manning plan (NMP).

c. To provide personnel manning statistics for personnel managers at NMPC and EPMAC.

UBIBO is used as a data source for ad hoc manning reports that are needed by NMPC-4 and NMPC-16. The file has also been employed by NAVPERSRANDCEN to identify critical ratings in the fleet and to determine personnel skill shortages and overages that exist at shore intermediate maintenance activities (SIMAS).

3. System Description.

a. Functions. EDPROJ performs three primary functions: (1) it projects the enlisted inventory 7 months into the future (1, 4, 7, and 12 months in UBIBO file), (2) it allocates personnel to the three manning control authorities (MCAs) (BUPERS, LANT, PAC), and (3) it performs fleet balancing. An in-depth explanation of these functions is found in documentation prepared by the Bureau of Naval Personnel (1978). This section is based on this documentation. As the functions are performed, reports are produced to assist and inform managers. Management is permitted to modify strengths and other data at a number of control points by means of overrides.

Projections of enlisted strengths are based on projected rotation dates (PRDs) and end of active obligated service (EAOS). A continuation rule is used to determine who remains in the Navy at EAOS and who leaves. According to the rule, E-7s and above remain in the Navy at EAOS, while nonrated personnel leave. For other personnel, leaving or staying depends on career continuation rules. These rules are derived from the previous year's reenlistment rate (by rating and pay grade) and the length of service (LOS).

In the allocation of personnel, the first step is to identify individuals who are rotatable assets. These are people who are due to graduate from school within 5 months and are not under orders. It also includes individuals who have a PRD date within 5 months and are not under orders. The second step is to determine the community that should receive the rotatable asset. An individual having a closed-loop NEC (i.e., a NEC always of greater importance than rating) is assigned to a community requiring the NEC. Next, the transitory NEC (i.e., a NEC of greater importance than rating for a particular

billet) needs are determined. When ratings are better manned than transitory NECs, then avails (i.e., personnel without orders who will rotate within 5 months) are transferred to the transitory NECs. When ratings are lesser manned than transitory NECs, no avails are transferred. The third step is to divide rotatable assets into shore eligibles, sea/surface air eligibles, and sea/submarine eligibles. Assets are assigned to fill the CNO priority composite to 100 percent manning.

The third function of EDPROJ, fleet balancing, is performed by comparing the strengths of the MCAs (BUPERS, LANT, PAC). The two that are manned at the lowest levels are raised to match the highest. The level of manning is measured as the percentage of billets authorized that are filled.

UBIBO is also produced by EDPROJ.

EDPROJ consists of more than 26 computer programs. Approximately 98 percent are written in COBOL. Reports are generated using COBOL programs and retrieval software packages such as ASSET and EASYTRIEVE.

b. Inputs. Files and tables provide the input data required by the EDPROJ system. The primary sources of data are (1) the enlisted master record (EMR) file, which includes data on inventory on board, NECs, sea/shore code, rating, and geographic location, and (2) the Navy manpower data accounting system (NMDAS), which provides data on billets authorized. Additional information is provided by the following tables, which must be updated periodically:

(1) Tour length table.
(2) "A" school conversion table.
(3) Enlisted rating community (ERC) table.
(4) Detailing community table.
(5) Before fleet balancing asset adjustment table.
(6) After fleet balancing asset adjustment table.
(7) Rate code table.
(8) Projected on board + 7 month strength adjustment table.
(9) Pay grade grouping table.

4. Manager/Contact.

DPCS Ruiz
Navy Annex
Washington, DC 20370
Attn: NMPC-472B
Autovon: 224-3733, Commercial: (202) 694-3733.

5. Resident Computer. EDPROJ resides on an IBM 370/165 computer, which is located at NMPC and belongs to OP-01.

6. Data.

a. Reports. Many reports are generated on a routine basis by EDPROJ. These reports are intended to assist the managers who perform the distribution functions and to provide additional information for other purposes. Some of the reports are the "Projection Report," "Fleet Balancing/Assignment Feedback Report," "Navy Enlisted Distribution Summary Report," and "Navy Total Reports." An example of the "Navy Total Reports" is given in Table F-1.

Table F-1

Navy Totals Report

53 MAPMIS 1300-4414 EM 01-02-78

NAVY TOTALS REPORT

12-31-77

ENLISTED REQUIREMENTS PLAN FIGURES FOR FY 78: (DATE AS OF 12-31-77)

PETTY OFFICERS	+ DESIG NON-P.U.	+ NONDESIG NON P.O.	= TOTAL REQUIREMENT	- TP&P REQ	- STUDENT BLTS AUTH	- TAR BLTS AUTH	- TEMAC BLTS AUTH	= DISTRIBUTION REQUIREMENTS
303801	45298	150987	500086	24769	53399	7542	1027	413349

BILLET FILE RELATIONSHIPS:

BUSHORE TO BUBASE: 93.7	LANTSHORE TO LANTBASE: 20.1	PACSHORE TO PACBASE: 20.6	NAVSHORE TO NAVBASE: 34.6
SURF/AIR SHORE: 100.0	SURF/AIR SHORE: 100.0	SURF/AIR SHORE: 100.0	SURF/AIR SHORE: 100.0
SUB SHORE: 0.0	SUB SHORE: 0.0	SUB SHORE: 0.0	SUB SHORE: 0.0
BUSEA TO BUBASE: 6.3	LANTSEA TO LANTBASE: 79.9	PACSEA TO PACBASE: 79.4	NAVSEA TO NAVBASE: 65.4
SUR/AIR SEA 100.0	SUR/AIR SEA 89.8	SUR/AIR SEA 94.4	SUR/AIR SEA 92.2
SUB SEA 0.0	SUB SEA 10.2	SUB SEA 5.6	SUB SEA 7.8
BUBASE TO NAVBASE: 19.4	LANTBASE TO NAVBASE: 41.6	PACBASE TO NAVBASE: 39.0	NAVSEA TO NAVSHORE: 1.89 : 1

IDENTIFICATION	DIST BLTS AUTH	P7 BLTS AUTH	DIFF	INV COB STG	DIST COB STG	DIST COB	COB - P5 AVAIL ASSET	%	CNO ASSET NEED	POB 7 STG	POB 7 %	P6-P7 PROJ ASSET	CNO PRI 1&2 P7 BLTS	POB7 STG	ADJ P7 BLTS	ADJ POB7 STG	ADJ POB7 %
O/A TOTAL NAVY	469399	470303	904	440879	443708	94.5											
TAR	7542	7568	26	7610	7372	97.7											
TEMAC	1027	1009	18-	1121	1121	109.2											
STUDENT	53399	53395	4-	42059	45682	85.5											
TP&P	24671	24671	0	14597	14610	59.2											
ADJUSTED TOT NAVY	302760	383660	900	374692	374923	98.0											

Ad hoc reports are also generated from UBIBO. Table F-2 provides an example of one that is generated by NMPC-472. This table shows how billets authorized for the data processing technician rating are distributed across pay grades and activities.

b. Files. The UBIBO record content and format description is given in Table F-3. UBIBO contains more than 600,000 records. A more complete explanation of the UBIBO data and codes may be obtained from NMPC-472.

The distinction between inventory and distributable should be made. An inventory count represents the number of people who actually possess a particular rating, NEC, and pay grade. A distributable count represents how people are assigned as reflected in their distribution rate or distribution NEC. For example, consider an individual who has a personnelman rating but, when assigned to a ship, fills a yeoman billet. For inventory purposes, he is counted as a personnelman; as a distributable, he is counted as a yeoman.

A sample dump of several UBIBO records is contained in Table F-4.

UBIBO is an excellent source of data for determining ratings and rates where shortages and overages exist.

7. Classification. UBIBO is unclassified.

8. Update Frequency. UBIBO is updated semimonthly at the end of the month and at mid-month. The end of the month version is used most frequently.

9. Limitations/Problems. No significant problems exist with UBIBO. However, users are advised that projections contained in the file should not be used for forecasting purposes. Projections are based on the EAOS and PRD dates of the enlisted force that exists at a point in time. Since accessions are not included, the inventory of personnel decreases as forecasts are projected into the future.

10. Developmental Plans. Improvements that will be made to EDPROJ include the following:

a. Projection methodologies will be improved to increase accuracy and efficiency.

b. Software will be modified and rewritten to reduce execution time and to simplify execution procedures.

c. A graphics capability is being added for examining historical trends in fleet balancing.

d. A linear programming approach for allocating personnel to transitory NECs is being developed and will be implemented. This effort is being carried out by B-K Dynamics. Examples of transitory NECs are instructors and recruiters.

e. Petty officer only billets will be incorporated into EDPROJ.

f. EDPROJ will be transferred to a minicomputer and a "what if" capability will be incorporated in EDPROJ as part of the distribution management support system (DMSS).

Table F-2

Sample Report Generated From UBIBO File

472D RUIZ 03-02-82
DP BILLETS AUTHORIZED SPREADING PAYGRADE -D010- DPCS TRACE
03-02-82
472-D010

UIC	ACTY NAME	E9	E8	E7	E6	E5	E4	E3	E2	E1	TOT
00011	OPNAV				3						3
00032	JPM-3				1	1					2
00034	NFINCTR CLEVLAND		1		1	3	2				7
00037	HQ NAVMATCOMD DC		1								1
00038	CINCPAC				2						2
00060	CINCLANTFLT				1	3					4
00061	CINCUSNAVEUR			1		2					3
00066	CINCLANT			1	1	6	3				11
00070	CINCPACFLT		1	1	1		2				5
00101	NAS SWEYMUTH MAS				1		1				2
00124	WAR COL NEWPORT			1	2	2	2	1			8
00129	SUBBASE NLONDON			1	1	2	1	1			6
00158	NAS WILLOW GROVE					1	1				2
0016A	PAC ELOPTEVFOSTF				1						1

Table F-3

Unclassified Billets Body File Record Format

Data Element	Length	Start
Filler	1	1
AUIC	5	2
Rating	4	7
Old pay grade (EMR pay grade code)	1	11
Primary NEC	4	12
Secondary NEC	4	16
Special category code (identifies billet/personnel when not detailed by normal detailer/controller), (see OPNAVINST 1000.16E)[a]	1	20
Functional area code (see OPNAVINST 1000.16E)[a]	1	21
Activity code	10	22
Rate abbreviation	5	32
Activity name	16	37
Priority one (see OPNAVINST 1000.16E)[a]	1	53
Priority two	1	54
Activity readiness code (identifies the enlisted personnel management center unit manning monitor)	2	55
Enlisted designator code (identifies special qualification not covered by rate or NEC (e.g., qualified diver))	3	57
Sea/shore code	1	60
Geographic location	8	61
Manning control (identifies manning control authority. B = BUPERS, L = LANT, P = PAC)	1	69
FTD (not used)	2	70
OFO (obsolete)	1	72
PUIC	5	73
DBI (not used)	1	78
Billets authorized	5	79
Billets authorized + 7 months	5	84
Billets authorized at start of fiscal year	5	89

[a]Chief of Naval Operations Instruction 1000.16E of December 1981; Subj: Manual of Navy Total Force Manpower Policy and Procedures.

Table F-3 (Continued)

Data Element	Length	Start
Billets authorized at start of next fiscal year	5	94
Inventory on board	5	99
Inventory, students	5	104
Inventory, TPP	5	109
Distributable on board	5	114
Distributable on board + 7 months	5	119
Present rate on board	5	124
Present rate students	5	129
Present rate TPP	5	134
MARP code	4	139
Stat. 1924 (not used)	1	143
Claimant (see OPNAVINST 1000.16E)[a]	4	144
Enlisted diary status (indicates status of UIC (e.g., commissioned, operational))	1	148
Filler	2	149
Distributable on board + 4 months	5	151
Billets authorized + 4 months	5	156
Billets authorized + 1 month	5	161
Distributable on board + 1 month	5	166
Billets authorized + 12 months	5	171
Distributable on board + 12 months	5	176
Filler	5	181

[a]Chief of Naval Operations Instruction 1000.16E of December 1981; Subj: Manual of Navy Total Force Manpower Policy and Procedures.

Table F-4

Sample Dump of UBIBO File

```
P046211900427020000  02930012000P3  AS  12 SPERRY      VE403502063260P45 04621D00
00E0000E0000E0000E0000B0000 0000 0000 0000 0000 0000 0000 1012170B03230000 0000E
0000E0000 0000E0000       P04621190050000       02930012000PSN AS  12 SPERRY      V
E403502063260P45 04621 0000 0000 0000 0000 0000 0000 0000 0000C0000C0000 0000 00
00 1012170B03230000C0000 0000 0000C0000 0000C      P046211900500000000  029300120
00PSN AS  12 SPERRY      VE403502063260P45 04621 0000 0000 0000 0000 000000000 00
00 0000 0000 0000 0000 0000 1012170B03230000 0000 0000 0000 0000 0000       P0462
1190052702       02930012000PSN AS  12 SPERRY      VE403502063260P45 04621 0000 00
00 0000 0000 0000 0000 0000 0000D0000F0000 0000 0000 1012170B03230000D0000 0000
000000000 0000F      P046211900527020000  02930012000PSN AS  12 SPERRY      VE4035
02063260P45 04621D0001A0001A0001A0001A0000B0000 0000 0000 0000 0000 0000 0000 10
12170B03230000 0001A0001A0000 0001A0000       P046211900600000000  02930012000PSA
 AS  12 SPERRY      VE403502063260P45 04621 0000 0000 0000 0000 0000A0000 0000 00
00 0000 0000 0000 0000 1012170B03230000 0000 0000 0000 0000 0000       P046212000
A0000       02930012000SKCM AS  12 SPERRY      VE403502063260P45 04621 0000 0000 00
00 0000 0000 0000 0000 0000A0000 0000 0000 0000 1012170B03230000 0000 0000 0000A
0000 0000       P046212000A00000000  02930012000SKCM AS  12 SPERRY      VE403502063
260P45 04621D0000A0000A0000A0000A0000A0000 0000 0000 0000 0000 0000 0000 1012170
B03230000 0000A0000A0000 0000A0000       P046212000J0000       02930012000SKCS AS
12 SPERRY      VE403502063260P45 04621 0000 0000 0000 0000 0000 0000 0000 0000 00
00A0000 0000 0000 1012170B03230000A0000 0000 0000 0000 0000A      P046212000J0000
0000  02930012000SKCS AS  12 SPERRY      VE403502063260P45 04621 0000 0000 0000 00
00 0000 0000 0000 0000 0000 0000 0000 0000 1012170B03230000 0000 0000 0000 0000
0000       P04621200020000       02930012000SK1  AS  12 SPERRY      VE403502063260P4
5 04621 0000 0000 0000 0000 0000 0000 0000 0000B0000A0000 0000 0000 1012170B0323
0000A0000 0000 0000B0000 0000A      P046212000200000000  02930012000SK1  AS  12 SP
ERRY      VE403502063260P45 04621D0000A0000A0000A0000A0000B0000 0000 0000 0000 00
00 0000 0000 1012170B03230000 0000A0000A0000 0000A0000       P04621200022818
 02930012000SK1  AS  12 SPERRY      VE403502063260P45 04621 0000 0000 0000 0000 00
00 0000 0000 0000A0000A0000 0000 0000 1012170B03230000A0000 0000 0000A0000 0000A
     P046212000228180000  02930012000SK1  AS  12 SPERRY      VE403502063260P45 046
2100000A0000A0000A0000A0000 0000 0000 0000 0000 0000 0000 0000 1012170B03230000
0000A0000A0000 0000A0000       P046212000228182816  02930012000SK1  AS  12 SPERRY
    VE403502063260P45 04621 0000 0000 0000 0000 0000A0000 0000 0000 0000 0000 00
00 0000 1012170B03230000 0000 0000 0000 0000 0000       P046212000300000000  0293
001200SK2  AS  12 SPERRY      VE403502063260P45 04621000000A0000A0000A0000A0000 00
00 0000 0000 0000 0000 0000 0000 1012170B03230000 0000A0000A0000 0000A0000
P0462120004          02930012000SK3  AS  12 SPERRY      VE403502063260P45 04621 00
00 0000 0000 0000 0000 0000 0000 0000A0000A0000 0000 0000 1012170B03230000A0000
0000 0000A0000 0000       P046212000400000       02930012000SK3  AS  12 SPERRY      V
```

APPENDIX G

NAVY MANPOWER REQUIREMENTS SYSTEM (NMRS)

NAVY MANPOWER REQUIREMENTS SYSTEM (NMRS)

1. Background. The Navy manpower requirements system (NMRS) is the official automated system for calculating enlisted, officer, and civilian manpower requirements for ships, aircraft squadrons, and shore activities. Requirements are based on workload volumes under differing levels of operational capability and conditions of readiness. The Navy Manpower and Material Analysis Center Altantic (NAVMMACLANT) developed, manages, and maintains NMRS for OP-111. The development began in the mid-1970s. Components of NMRS were first implemented during 1978. NMRS is totally operational.

2. Purpose/Application. The principal purposes of NMRS are:

a. To generate ship manpower documents (SMDs), squadron manpower documents (SQMDs), and shore manpower documents (SHMDs) based upon workload variables and tasking.

b. To provide requirements inputs to other requirements systems, such as the Navy manpower planning system (NAMPS) and the Navy manpower requirements data base (NMRDB).

c. To provide a means for calculating accurate and consistent manpower requirements in a timely manner.

d. To provide a data base from which requirements reports may be produced and user queries at unit and aggregate levels may be answered.

NMRS provides data to the Navy Sea Systems Command (NAVSEA) that is needed for the generation of preliminary ship manning documents (PSMDs).

3. System Description. NMRS calculates the ship, aircraft squadron, and shore manpower requirements needed to perform the mission tasking contained in the required operational capability (ROC) and projected operational environment (POE) statements. A ROC describes the function and required capabilities, whereas a POE describes the sea, wartime, or peacetime environment in which a ship or aircraft is expected to operate. Ships and aircraft squadrons both have ROC and POE statements. Shore activities have shore required operational capability (SHOROC) statements, but do not have POE statements.

NMRS is written in COBOL. The integrated data base management system (IDMS) is used for data retrieval and reprot generation.

The following paragraphs describe the ROC/POE statements, methodology, and inputs needed for the generation of ship, aircraft squadron, and shore manning documents. Portions of these paragraphs have been extracted from Sorenson and Blanco (1975) and documentation prepared by the Navy Manpower and Material Analysis Center Atlantic (1979).

a. Ship Manpower Document (SMDs).

(1) ROCs/POEs. Table G-1 provides an example of a partial ship ROC. It displays the mission area, with supporting operational and suboperational capabilities, together with samples of symbol use and partial capability explanation.

Table G-1

Partial Ship ROC

	I	III	IV	IP	OFF	W
(MOB) Mobility						
MOB-11 Replenishment at sea.						
MOB 11.1 Receive vertical replenishment.		F	F		E	
(AAW) Anti-air Warfare						
AAW-8 Detect, identify, and track air targets.						
AAW 8.1 Measure aircraft altitude by fade chart.	F	F	F			
AAW 8.3 Maintain accurate air picture.	F	P	P			
III (P) and IV (P)--assume shift to condition 1 when attack probable.						
AAW-9 Control combat air patrol.						
AAW 9.1 Control CAP and air intercept missions against attack/ ECM aircraft	F	P	P		A	
III (P) and IV (P)--augmented by off-watch personnel.						
AAW-11 Engage air targets using surface-to-air armament.						
AAW 11.2 Engage medium/high altitude, high speed aircraft with short range missiles.	F	F				
AAW 11.4 Engage low/medium/high altitude air attact with gunfire.	F	P				
III (P)--one mount manned without magazine.						

Note. Taken from Chief of Naval Operations Instruction 3510.3B of June 1972; subj: Instruction for preparation of required operations capabilities statement (ROC) and projected operational environment (POE).

Legend

Conditions of readiness:

I--General quarters.
III--Wartime steaming.
IV--Peacetime steaming.
IP--In port.
OFF--Capability accomplished by off-duty personnel.
W--Watch.

Degree of readiness:

F--The capability is to be fully achieved.
P--The capability is to be only partially achieved.
A--To achieve the necessary degree of capability, the assistance of off-watch or off-duty personnel is required.
E--A special team or detail is required.

Examples of POE statements for a ship are given below. These statements describe the most demanding condition of operation for which a ship must be manned.

(a) At sea in wartime.

(b) Capable of performing all offensive and defensive functions simultaneously while in readiness condition 1.

(c) Capable of performing other functions that are not required to be accomplished simultaneously.

(d) Continuous readiness condition III at sea.

(e) Capable of performing all maintenance for which ship's company is assigned responsibility.

(2) Methodology. Ships are divided into three functional areas for purposes of calculating manpower requirements. These functional areas are listed and described below:

(a) Operational manning--Manpower needed to man essential operating stations during conditions I, III, and special situations such as flight quarters, underway replenishment, and amphibious operations.

(b) Maintenance manning--Manpower needed to perform required planned, corrective, and facility maintenance (housekeeping).

(c) Own unit support--Manpower needed to perform administrative, military, resupply, food service, hygenic, utility tasks, and special evolutions.

Operational manning needs are based on ROCs that apply to specific ship classes. Ratings are determined by using the manual of Navy Enlisted Manpower and Personnel Classifications and Occupational Standards.

Maintenance manning requirements are determined from the Navy maintenance and material management (3-M) system, which provides information regarding required quantity and minimum skill level of personnel. Total planned maintenance manning requirements are determined by summing the requirements for individual equipments installed in the ship. Corrective maintenance manning requirements are determined by applying ratios of planned maintenance to corrective maintenance.

Manning requirements for facility maintenance and own unit support are determined through standard industrial engineering approaches, the operational audit, job task analysis, work sampling, and statistical analysis. The operational audit is method used for calculating workload based on information collected by analysts who interview work center supervisors to determine the type of work required and how often it must be done.

Ship manning requirements for the functional areas are calculated first in terms of man-hours. The man-hours are divided by the Navy standard workweek to obtain manpower quantities.

(3) Input Data. The major inputs to NMRS needed to generate ship manpower requirements are summarized below:

(a) Reference data--Includes rating, occupational code, NEC, Navy officer billet codes, and Navy standard workweek (from OPNAVINST 1000.16 series).[1]

(b) Navy maintenance and material management (3-M) data--Contains planned maintenance (PM) workload by rating, pay grade, and NEC.

(c) Watch information--Obtained from ships of the same class or subclass. Information is at rating, pay grade, and NEC levels.

(d) Facilities maintenance/own unit support matrix--Contains hours of required weekly maintenance by work center obtained from information by class of ship.

(e) Ship organizational data--Defines the organizational structure of a ship, including the departments of a ship (e.g., operations and supply).

b. Squadron Manpower Documents (SQMDs).

(1) ROCs/POEs. SQMDs are also based upon ROC and POE statements that describe the mission tasking and operating environments of aircraft squadrons. Several very general examples of ROC statements for an aircraft squadron are: (a) drop bombs, (b) launch missiles, and (c) air to ground gunnery. Examples of POE statements for an aircraft squadron are given below:

(a) Embarked on board an attack aircraft carrier.
(b) Perform assigned missions under wartime conditions.
(c) Capable of performing all primary functions simultaneously.
(d) 12 AXX aircraft assigned.
(e) 60 hours per month per aircraft projected utilization.
(f) Average 12-hour flying day.
(g) Average 2.0 hours per sortie.
(h) Average 28 sorties each 12-hour flying day.

(2) Methodology. The three types of manpower included in SQMDs are maintenance manpower, the flight crew, and directed manning.

(a) Maintenance manpower is determined by first calculating workload in man-hours for each of the maintenance categories listed below:

1. Planned maintenance (PM) (preventive maintenance performed routinely) and corrective maintenance (CM) (unscheduled). The workload for PM and for CM is based on 3-M data. Man-hours required to perform PM are derived from an accounting expression, whereas those required to perform CM are calculated using a regression equation.

---

[1]Chief of Naval Operations Instruction 1000.16E of December 1981; subj: Manual of Naval Total Force Manpower Policy and Procedures.

2. Administrative support (AS) (supervisory, clerical, and administrative functions). Workload in man-hours for AS is related to PM and CM workload in the following expression:

$$AS = a + bx$$

where a and b are regression coefficients and x represents total man-hours per week of PM and CM maintenance.

3. Facilities maintenance (FM) (housekeeping of living, working, and operating spaces). FM is calculated as a percentage of AS workload.

4. Utility task (UT) (ship working party workload for carrier-based squadron). UT workload is determined using the operational audit technique.

Once workload has been estimated in man-hours per week for all categories of maintenance, it is converted to manpower quantities. This is done by dividing man-hours by the estimated productive hours worked per week. The maintenance manpower quantities are distributed across the ratings, pay grades, and NECs required for the types of aircraft in the squadron by using 3-M and operation audit data.

(b) The manpower quantities for the flight crew and directed manning are computed directly, not from workload. For fleet squadrons, the flight crew is determined by number of aircraft and crew seat ratio is defined in the POE.

(c) Examples of direct manning requirements (directed by OP-11) are the aircraft intermediate maintenance department (AIMD), fleet replacement aviation maintenance personnel (FRAMP), integrated services, and the communications and electronic warfare departments. These requirements are determined using the operational audit technique.

c. Shore Manpower Documents (SHMDs).

(1) SHORSTAMPS/SHOROCS. Included in NMRS is the shore requirements, standards, and manpower planning system (SHORSTAMPS), which is the basic approach in manpower planning and programming for the Navy shore establishment. SHORSTAMPS is composed of the shore required operational capabilities (SHOROC), staffing standards, and the SHMDs.

SHOROC statements, which are analogous to ship and aircraft squadron ROCs, list the operational tasks that must be performed to support the mission. SHOROC statements provide a structure composed of mission areas, functional areas, and required functional capabilities (RFCs), which describe the operations performed by an activity to carry out its assigned mission. The RFC parameters are the independent or predictor variables in the manpower estimation models. The four levels of detail of a SHOROC with example are given on the following page.

(2) Methodology. Staffing standards development consists of three phases: preliminary, measurement, and computation.

During the preliminary phase of each staffing standards study, various commands are visited to define the functional area being studied. Research is carried out to determine the accuracy and completeness of the SHOROC language as well as the

Level of Detail	SHOROC Detail	Staffing Standard Detail
Mission area	SUP	Provide supply management and administrative control, procure, receive, account for, store, issue and control material, and perform ancillary services.
Functional area RFC SUP 04.012 Parameter	SUP04 DB9100 DC21	Provide ancillary supply services. Operate an enlisted dining facility. Serve as an average 9100 rations monthly utilizing a total of 21 lines per week.

methods used to carry out each function. Having completed the research, a measurement plan is developed to include the definition of the function (work center description) and the procedures to be used to collect workload data during the measurement phase. Once a measurement plan has been written, it is tested at several activities for validity. This is the second opportunity for activities performing the function being studied to provide input. Recommendations for changes or additions are incorporated into the plan.

Once the plan has been tested and reviewed by manpower claimants, the NAVMMACs visit various commands that have been selected (using various sampling strategies) to collect man-hours and workload parameters. Teams of analysts are sent to these activities where an in-depth study is carried out. The length of the study can vary from a week to a month, depending on the work measurement techniques used as well as the size of the activity and complexity of the function being measured. The information gathered at each activity is processed using various statistical and mathematical techniques, such as regression analysis. An example of one standard is the equation below, which predicts the manpower (in terms of man-hours) to "operate an enlisted dining facility":

$Y = a + bX_1 + X_2$: where a, b, c are regression coefficients,
Y is the estimated required man-hours,
X_1 is the average monthly rations, and
X_2 is the number of serving lines used weekly.

(3) Input Data. The major inputs that are required to determine shore manpower requirements are (a) the staffing standard equation, (b) SHOROC input (RFCs, parameters), and (c) a staffing table that depicts the qualitative requirements.

4. Manager/Contacts.

a. Manager (Data Processing).

Mr. Dan Lowe
NAVMMACLANT
Norfolk, VA 23511
Autovon: 690-4137, Commercial: (804) 444-4137.

b. Contact for ships and squadrons.

Mr. Larry Statham
NAVMMACLANT
Norfolk, VA 23511
Autovon: 690-4137, Commercial: (804) 444-4137.

c. Contact for shore.

Mr. John Simon or Mr. Frank Almer
NAVMMACLANT
Norfolk, VA 23511
Autovon: 690-4881, Commercial: (804) 444-4881.

5. Resident Computer. NMRS resides on IBM computers located at the National Institute of Health (NIH) in Bethesda, Maryland.

6. Data.

a. Reports. The primary reports generated by NMRS are the SMDs, SQMDs, SHMDs, and manpower requirements work sheets (MRWs). An MRW is a statement of requirements for a function. The SMD and SQMD requirements are at the m+12 level. MRW and SHMD requirements are all developed at peacetime levels. Requirements for enlisted manpower are given by rating, NEC, and pay grade. Civilian requirements are by pay plan, series, and pay grade. For officers, they are given by designator code and pay grade.

Table G-2 is the functional workload section of an SMD for USS PENSACOLA (LSD 38). It shows the functional hours per week required for performing the various ship functions. Table G-3 is the functional workload section of a SQMD for Training Squadron Two One (VT-21). It shows the functional workload in hours per week required to perform several VT-21 functions. The functional workload in both tables are based on ROC/POE statements. Subsequent sections of the SMD and SQMD show manpower quantities by rating/NEC/pay grade and by designator code/pay grade.

b. Files. NMRS contains multiple files. For purposes of manpower requirements research, the billet files appear to be the "best" NMRS files. These files contain relevant data and are structured so that data may easily be accessed. Both preliminary shore, ship, and aircraft squadron billet files and final ship and aircraft billet files exist. The final ship and aircraft squadron billet files have been approved by the Office of the Chief of Naval Operations (OPNAV). The record description of the preliminary billet file for ships is given in Table G-4. A sample dump of this file or other billet files may be obtained from NAVMMACLANT. The preliminary shore billet file and aircraft billet files contain similar information.

7. Classification. The NMRS data base is unclassified.

8. Update Frequency. The NMRS data base is continuously updated.

Table G-2

Functional Workload Section of SMD

Section V

Functional Workload for USS PENSACOLA (LSD 38)

Function	Func. Hours Req.	Func. Hours %
Operational manning (OM)	8,960.0	39.6
Planned maintenance (PM)	1,865.5	8.1
Corrective maintenance (CM)	772.3	3.3
Own unit support (OUS)	4,913.9	21.4
Facilities maintenance (FM)	2,557.7	11.1
Productivity allowance (PA)	2,001.0	8.7
Service diversion allowance (SD)	940.0	4.1
Training (T)	860.0	3.7
Activity Total	22,870.4	100.0

Note. From Chief of Naval Operations Instruction 5320.183A of September 1981; subj: Ship manpower document USS PENSACOLA (LSD 38).

Table G-3

Functional Workload Section SQMD

Section V

Functional Workload for Training Squadron Two One (VT-21)

Function	Func. Hours	Total Hours
Exec. Dept.		
Officer manning (OW)	63.8	
Directed manning (DM)	575.8	
		639.6
Admin. Dept.		
Officer manning (OW)	95.7	
Administrative support (AS)	212.7	
		308.4
First LT Office		
Officer manning (OW)	31.9	
Directed manning (DM)	152.1	
Administrative support (AS)	31.9	
Facilities maintenance (FM)	127.6	
		343.5
Training Dept.		
Officer manning (OW)	638.0	
		638.0
Training Office		
Directed manning (DM)	63.8	
Administrative support (AS)	39.3	
Facilities maintenance (FM)	7.6	
		110.7

Note. From Chief of Naval Operations Instruction 5320.417A of September 1981; subj: Aircraft Squadron Manpower Document VT-21.

Table G-4

Record Description of the Preliminary Billet File (Ship)

Field Description		Position
Record type (code 5 indicates billets)		1
UIC		2-6
Abbreviated name of function		7-36
Billet sequence number (computer assigned number to make billet unique)		37-42
Billet caption (title)		43-82
Skill class (officer, enlisted, or civilian)		83
Rating code	Enlisted	84-87
Nondesignated striker	Enlisted	88
Enlisted pay grade	Enlisted	89-90
Primary NEC	Enlisted	91-94
Secondary NEC	Enlisted	95-98
Officer pay grade	Officer	84-85
Designator code	Officer	86-89
Filler	Officer	90
Primary NOBC	Officer	91-94
Secondary NOBC	Officer	95-98
Rating abbreviation		99-101
Primary NOBC--short title		102-141
Secondary NOBC--short title		142-181
Number of watches assigned		182
Organization code (identifies organizational component of an activity)		183-187
Watch ID (10 characters)	5 sets	188-407
Condition of readiness (2 characters)	5 sets	188-407
Watch station title (32 characters)	5 sets	188-407
Functional hours (numbers of man-hours for each function allotted to billet, 5 characters)	15 sets	408-482

9. Limitations/Problems. All activities (ship, aircraft squadron, and shore) are included in the NMRS data base. Users of the NMRS data base should be aware that shore staffing standards are not available for all shore functions. For functions where staffing standards do not exist, authorized billets from the Navy manpower data accounting system (NMDAS) are used as a proxy for requirements. Contractor and civilian federal employee data are aggregated and measured in terms of federal employees.

10. Developmental Plans. Plans exist to link the Navy manpower requirements system (NMRS), Navy manpower requirements data base (NMRDB), and Navy manpower data accounting (NMDAS) data bases together. Interactive software will allow claimants to access the integrated data from computer terminals located both at NAVMMACLANT and the Navy Annex. Additionally, NAVMMACLANT is currently investigating methodologies for forecasting manpower requirements for activities that are not covered by staffing standards. Communities of activities for which new methodologies are being developed include recruiting, medical, and Navy air rework facilities (NARFs).

APPENDIX H

NAVY MANPOWER REQUIREMENTS DATA BASE (NMRDB)

NAVY MANPOWER REQUIREMENTS DATA BASE (NMRDB)

1. Background. The Navy manpower requirements data base (NMRDB) was developed in 1978 by the Navy Manpower and Material Analysis Center Atlantic (NAVMMACLANT) for the Office of the Chief of Naval Operations (OPNAV). NMRDB is a repository for officer, enlisted, and civilian manpower requirements that are generated by the Navy manpower requirements system (NMRS).

2. Purpose/Applications. The purpose of NMRDB is to provide a comprehensive requirements data base to support the manpower planning, programming, and budgeting processes. Organizations that are supported by the system include OP-110, OP-111, OP-112, and OP-122. Support is also provided to the Commander in Chief Pacific Fleet (CINCPACFLT) and the Commander in Chief Atlantic Fleet (CINCLANTFLT) in the form of special reports. Finally, NMRDB serves as the source of manpower requirements for the Navy Manpower Planning System (NAMPS).

In the future, NMRDB may be used to (a) provide input data for modeling techniques such as impact analysis, and (b) provide data for trade-off studies involving military, civilian, contractor, or reserve requirements. Results of these studies may be used for establishing recruiting and long lead-time training goals.

3. System Description. NMRDB is a management information system that has the capability of providing users with detailed requirements information. Users may obtain requirements information from a menu of preselected special reports or by performing queries to examine specific subpopulations. The data base contains military and civilian manpower requirements for all activities (that contain manpower) for the current fiscal year and for the 2 following years. The previous year may also be retained. Requirements are subdivided by designator, rating, occupational code, Navy officer billet code (NOBC), Navy enlisted code (NEC), pay grade, and other categories. When staffing standards are not applicable for an activity or portion thereof, authorizations from the Navy manpower data accounting system (NMDAS) are used as a proxy for requirements.

Claimant augments are not carried in the NMRDB data base but, rather, are stored in a separate file. A claimant augment is an increment or decrement to a claimant's requirements. It is applied when a claimant judges that the requirements generated by the Navy manpower requirements system (NMRS) are inaccurate. The NMRDB system is written in COBOL.

The three sources of input data are:

a. Navy manpower requirements system (NMRS)--Manpower requirements for ships, aircraft squadrons, and shore establishments.

b. Navy manpower data analysis system (NMDAS)--Billets authorized that are used as a proxy for requirements.

c. Civilian position file (CPF)--Billets authorized that are used as a proxy for requirements.

The NMRDB is capable of handling both batch and on-line queries for generating reports. Under both query systems, the user enters query requests by responding to computer prompts. The query requests define the characteristics of a specific subpopulation. Query requests are executed from computer terminals located at NAVMMACLANT, CINCLANTFLT, and the Navy Annex. Under the batch query system, a user may either direct the response to a printer or store it in a saved disk file. By using the batch query system, the user has access to more detailed data than is available with the on-line system.

4. Manager/Contact.

Mr. Larry Statham
NAVMMACLANT
Norfolk, VA 23511
Autovon: 690-4137, Commercial: (804) 444-4137.

5. Resident Computer. NMRDB resides on IBM computers located at the National Institute of Health (NIH).

6. Data.

a. Reports. Many reports are generated from the NMRDB data base via query requests. These reports include batch special request reports, batch summary reports, and on-line reports.

Examples of batch special request reports are Special Request Report #1--Activity Listing, Special Request #2--Billet Summary, and Special Request Report #3--Billet File Listing. Examples of batch summary reports are Unconstrained Manpower Requirements Summary Report by Skill Class, Unconstrained Manpower Requirements Summary Report by Officer Pay Grade, and Unconstrained Manpower Requirements Summary Report by Civilian Pay Grade. Examples of on-line reports are On-line Query Report by Skill Class, On-line Query Report by Civilian Pay Grade, and On-line Query Report by Enlisted Pay Grade. Tables H-1 through H-3 provide examples of batch special request, batch summary, and on-line reports respectively.

b. Files. Although NMRDB contains multiple files, only the extraction file that is input to the Navy manpower planning system will be discussed here. For purposes of manpower requirements research, the extraction file appears to be the most useful file since it (1) contains the NMRDB data that is relevant to the project and (2) is structured so that data may be easily accessed. The record description is contained in Table H-4. A sample dump of this file may be obtained from NAVMMACLANT.

The extraction file is input to NAMPS at least twice annually. Presently, only 1 year of requirement counts are passed to NAMPS, even though the file allows for 7 years. The 1 year is either the current fiscal year or the next fiscal year (FY + 1).

7. Classification. The NMRDB data base is presently unclassified.

8. Update Frequency. The maintenance realm data base, which has a batch query capability, is updated daily. The summary realm data base, which has an on-line query capability, is updated monthly. Ship and squadron requirements are updated ccontinuously; and shore requirements, annually.

9. Limitations/Problems. Problems associated with NMRDB include the following:

a. Billet sequence codes and billet titles are not included in the data base. This information would be useful for some analyses.

b. Contractor and civilian federal employee data are aggregated and are measured in terms of federal employees.

10. Developmental Plans. Plans exist for linking NMRDB and several manpower systems together under the manpower claimant access support system (MANCLASS).

Table H-1

Sample Special Request Report #3--Billet File

Total Force Requirements System
Special Request Report #3

Billet PILR Listing--Unconstrained Manpower Requirements
UIC 62481--NAS Bermuda

PRIMARY SKILLS*	ALTERNATE SKILLS*	BOC	AQD	UCODE	SSPEC CODE	F A C	S I	M E C	R C	B L	ADDL CNTS	DATA TYPE & NO	COLUMN INFORMATION 80B	81B	82B	83G
OFF 6510J 1306		2K	923				0				0	R 1	1	1	1	
OFF 6510J 1306		ZCA	923				0				0	R 1				1
OFF 6380J 8198	CIV WS-02650-16	A2					2				0	R 1	1	1	1	
OFF 6380J 8198	CIV WS-02650-16	ACB					2				0	R 1				1
OFF 6330J 8195	CIV WS-05878-14	A2					2				0	R 1	1	1	1	
OFF 6330J 8195	CIV WS-05878-14	ACB					2				0	R 1				1
OFF 6330J 8192	CIV WS-03806-14	A2					2				0	R 1	1	1	1	
OFF 6330J 8192	CIV WS-03806-14	ACB					2				0	R 1				1
OFF 6330J 8191	CIV WS-08602-14	A2					2				0	R 1	1	1	1	
OFF 6330J 8191	CIV WS-08602-14	ACB					2				0	R 1				1
OFF 3100J 1991		ZDG					2				0	R 1				1
OFF 3100J 1918		87					0				0	R 1	1	1	1	
OFF 3100J 1918		ZAB					0				0	R 1				1
OFF 3100J 1530		83	908				0				0	R 1	1	1	1	
OFF 3100J 1530		WBA	908				0				0	R 1				1
OFF 3100J 1010	CIV GS-00510-12	KCK					4				0	R 1				1
OFF 2500J 2505		IBM					2				0	R 1				1
OFF 2500J 2505		DM									0	R 1	1	1	1	
OFF 1650J 2412	CIV GS-01081-11	ICE					4				0	R 1				1
OFF 1322J 8674 8557		UF	DRO	D							0	R 1	1	1	1	
OFF 1322J 8656 8557		JE	DRO	D			0				0	R 1	1	1	1	
OFF 1322J 8656 8557		IFB	DRO	D			0				0	R 1				1
OFF 1322J 8606 8508		OBA	DJ4	D		M	0				0	R 1				1
OFF 1322J 8606 8508		OBA	DFO	D		M	0				0	R 1				1
OFF 1322J 8606		999					0				0	R 1				3
OFF 1312J 8606 8571		OBA	DJ4	D		M	0				0	R 1				1
OFF 1311J 9515 8538		86	DYO	C			0				0	R 1	1	1	1	
OFF 1311J 9515 8538		CAB	DYO	C			0				0	R 1				1
OFF 1311J 8696 8538		UF	DW1	C							0	R 1	1	1	1	
OFF 1311J 8696 8538		NAB	DW1	C							0	R 1				1
OFF 1311J 8599		PE	DR4	D			0				0	R 1	1	1	1	
OFF 1311J 8599		PBK	DR4	D			0				0	R 1				1
OFF 1311J 8190 8599		22	DR4	D			0				0	R 1	1	1	1	
OFF 1311J 8190 8599		ABB	DR4	D			0				0	R 1				1
OFF 1300J 8177	CIV GS-01910-11	A2					2				0	R 1	1	1	1	
OFF 1300J 8177	CIV GS-01910-11	ACB					2				0	R 1				1
OFF 1000J 3350		PIB					2				0	R 1				1

* Selection criteria are UIC and TYPE OF DATA

OFFICER COLUMNS: DESIGNATOR/RANK, PRIMARY NOBC, SECONDARY NOBC
ENLISTED COLUMNS: RATE, PRIMARY NEC, SECONDARY NEC

Table H-1 (Continued)

PRIMARY SKILLS*	ALTERNATE SKILLS*	BOC	AQD	UCODE	SSPEC CODE	F A C	S I	E C	R C	B L	ADDL CNTS	DATA TYPE & NO	COLUMN INFORMATION 80B	81B	82B	83G
OFF 6510J 1306		2X	923				0				0	R 1	1	1	1	
OFF 6510J 1306		ZCA	923				0				0	R 1				1
OFF 6380J 8198	CIV WS-02650-16	A2					2				0	R 1	1	1	1	
OFF 6380J 8198	CIV WS-02650-16	ACB					2				0	R 1				1
OFF 6330J 8195	CIV WS-05878-14	A2					2				0	R 1	1	1	1	
OFF 6330J 8195	CIV WS-05878-14	ACB					2				0	R 1				1
OFF 6330J 8192	CIV WS-03806-14	A2					2				0	R 1	1	1	1	
OFF 6330J 8192	CIV WS-03806-14	ACB					2				0	R 1				1
OFF 6330J 8191	CIV WS-08602-14	A2					2				0	R 1	1	1	1	
OFF 6330J 8191	CIV WS-08602-14	ACB					2				0	R 1				1
OFF 3100J 1991		ZDG					2				0	R 1				1
OFF 3100J 1918		87					0				0	R 1	1	1	1	
OFF 3100J 1918		ZAB					0				0	R 1				1
OFF 3100J 1530		83	908				0				0	R 1	1	1	1	
OFF 3100J 1530		WBA	908				0				0	R 1				1
OFF 3100J 1010	CIV GS-00510-12	KCK					4				0	R 1				1
OFF 2500J 2505		IBN					2				0	R 1				1
OFF 2500J 2505		DM									0	R 1	1	1	1	
OFF 1650J 2412	CIV GS-01081-11	ICX					4				0	R 1				1
OFF 1322J 8674 8557		UF	DRO	D							0	R 1	1	1	1	
OFF 1322J 8656 8557		JE	DRO	D			0				0	R 1	1	1	1	
OFF 1322J 8656 8557		IFB	DRO	D			0				0	R 1				1
OFF 1322J 8606 8508		OBA	DJ4	D		X	0				0	R 1				1
OFF 1322J 8606 8508		OBA	DFO	D		X	0				0	R 1				1
OFF 1322J 8606		999					0				0	R 1				3
OFF 1312J 8606 8571		OBA	DJ4	D		X	0				0	R 1				1
OFF 1311J 9515 8538		86	DY0	C			0				0	R 1	1	1	1	
OFF 1311J 9515 8538		CAB	DY0	C			0				0	R 1				1
OFF 1311J 8696 8538		UF	DW1	C							0	R 1	1	1	1	
OFF 1311J 8696 8538		NAB	DW1	C							0	R 1				1
OFF 1311J 8599		PE	DR4	D			0				0	R 1	1	1	1	
OFF 1311J 8599		PBK	DR4	D			0				0	R 1				1
OFF 1311J 8190 8599		22	DR4	D			0				0	R 1	1	1	1	
OFF 1311J 8190 8599		ABB	DR4	D			0				0	R 1				1
OFF 1300J 8177	CIV GS-01910-11	A2					2				0	R 1	1	1	1	
OFF 1300J 8177	CIV GS-01910-11	ACB					2				0	R 1				1
OFF 1000J 3350		PIB					2				0	R 1				1

• Selection criteria are UIC and TYPE OF DATA

*OFFICER COLUMNS: DESIGNATOR/RANK, PRIMARY NOBC, SECONDARY NOBC
ENLISTED COLUMNS: RATE, PRIMARY NEC, SECONDARY NEC

Table H-2

Sample Unconstrained Manpower Requirements Summary Report by Civilian Pay Grade

04/02/81 AT 20:15:02

TOTAL FORCE REQUIREMENTS SYSTEM

UNCONSTRAINED MANPOWER REQUIREMENTS

COMMUNITY: SHORE

SUMMARY REPORT BY CIVILIAN PAYGRADE
(PRIMARY SKILLS ONLY)

YEAR REQUESTED: 1983

16 & OVER	15 & 14	13	12	11	10 & 09	08 & 07	06 & 05	04 & 03	02 & 01	TOTAL
6,524	8,930	14,954	28,690	32,742	78,646	40,105	48,052	39,369	5,575	303,587

THIS REPORT WAS PREPARED USING THE FOLLOWING QUALIFICATIONS:

BILLETS FIELD: SKILLCLASS = CIVILIAN

- Example of a "one-line query" response where SKILLCLASS = CIVILIAN

Table H-3

Sample of On-line Report by Enlisted Pay Grade

RUN: 04/02/81 AT 16:30:56 TOTAL FORCE REQUIREMENTS SYSTEM DATA BASE CREATION DATE: 12/24/80

ONLINE QUERY REPORT BY ENLISTED PAYGRADE

E-9 MCPO	E-8 SCPO	E-7 CPO	E-6 PO1	E-5 PO2	E-4 PO3	DESIGNATED STRIKER	E-3 XN	E-2 XA	E-1 XR	TOTAL
506	1,255	2,840	9,545	15,879	14,071	11,953	10,089	0	0	66,138

THIS REPORT WAS PREPARED FOR THE YEAR 1983 USING THE FOLLOWING QUALIFICATIONS:

ACTIVITY DESCRIPTOR: COMMUNITY = SQUADRON
BILLET DESCRIPTOR: SKILLCLASS = ENLISTED

- Example of a "one-line query" response where SKILLCLASS = ENLISTED

Table H-4

Record Description of Navy Manpower Requirements Data Base (NMRDB)
Extraction for the Navy Manpower Planning System (NAMPS)

Field Description		Positions
UIC		1-5
Skill class (indicates officer, enlisted, or civilian)		6
Rating abbreviation	Enlisted	7-9
Filler	Enlisted	10-13
Enlisted pay grade	Enlisted	14-15
Primary NEC	Enlisted	16-19
Secondary NEC	Enlisted	20-23
Designator code	Officer	7-10
Filler	Officer	11-13
Officer pay grade	Officer	14-15
Primary Navy officer billet code	Officer	16-19
Secondary Navy officer billet code	Officer	20-23
Pay plan (GS, WG, etc.)	Civilian	7-8
Occupational code	Civilian	9-13
Civilian pay grade	Civilian	14-15
Filler	Civilian	16-23
Billet occupational code (used to functionally code each specific billet/position in shore activities)		24-26
Functional area code (identifies billets requiring special consideration in personnel detailing)		27
Functional area code 2		28
Activity code		29-38
Alternate skill class (indicates officer, enlisted, or civilian)		39
Alternate rating abbreviation	Enlisted	40-42
Filler	Enlisted	43-44
Alternate enlisted pay grade	Enlisted	45-46
Alternate primary NEC	Enlisted	47-50
Alternate secondary NEC	Enlisted	51-54
Alternate designator code	Officer	40-43
Filler	Officer	44
Alternate officer pay grade	Officer	45-46
Alternate primary Navy officer billet code	Officer	47-50
Alternate secondary Navy officer billet code	Officer	51-54
Rate code		55-58
Alternate pay plan		59-60
Alternate occupational code		61-65
Alternate civilian pay grade		66-67
Data source (identifies source of data)		68
Standards indicator		69
Activity difference (indicates ship, shore, or squadron)		70
Count current fiscal year	End-strength requirements	71-75
Count fiscal year + 1	End-strength requirements	76-80
Count fiscal year + 2	End-strength requirements	81-85
Count fiscal year + 3	End-strength requirements	86-90
Count fiscal year + 4	End-strength requirements	91-95
Count fiscal year + 5	End-strength requirements	96-100
Count fiscal year + 6	End-strength requirements	101-105

APPENDIX I

SUMMARY OF SYSTEM CHARACTERISTICS

Summary of System Characteristics

System Name/ Acronym	Purpose	Data Description	Manager/ Contacts	Research Computer	Classification	Update	Limitations/ Problems	Developmental Plans
Comprehensive occupational data analysis programs (CODAP).	Performs statistical analyses on rating duty and task data.	Duties and tasks performed, percent of personnel and time spent performing them, demographic and other data.	Manager/Requests: Officer-in-Charge NODAC, Building 150, Washington Navy Yard (Anacostia) Washington, DC 20374, Autovon: 288-4626, Com: (202) 433-4626 Questions: Technical Director, NODAC Building 150 Washington Navy Yard (Anacostia) Autovon: 288-4621, Com: (202) 433-4621	IBM 4331-1 located at NODAC.	Unclassified.	Data is collected for each rating approximately every 5 years.	Problems associated with performing independent analyses on raw data are: (1) variables and formats are not constant over all ratings and (2) they may vary over time.	A new CODAP system is being designed by Texas A&M University to allow "clustering" on people and easier manipulation of data.
Enlisted distribution projection system/unclassified billets body file (EDPROJ/ UBIBO).	EDPROJ provides reports and data required to support the enlisted distribution process. UBIBO is provided as a by-product of EDPROJ.	UBIBO contains inventories on board, distributables, and billets authorized by AUIC, rating, NECs, and other data.	DPCS Ruiz, Navy Annex, Washington, DC 20370 Attn: NMPC-472B Autovon: 224-3733, Com: (202) 694-3733	IBM 370/165 located at NMPC.	Unclassified.	UBIBO is updated at the middle and the end of the month.	Projected data are not intended to be used for forecasting purposes.	A linear programming approach for allocating personnel to transitory NECs is being developed. System will be incorporated into DMSS.
Enlisted history file (EHF).	Provides data to support longitudinal studies conducted by the Naval Health Research Center and Bureau of Medicine and Surgery.	Demographic and service history data that track enlisted personnel throughout their career. Extends from Jan 1, 1965 to the present.	Mr. Milan Miller Naval Health Research Center, P.O. Box 85122 San Diego, CA 92138, Autovon: 933-2061, Com: (619) 225-2061	IBM computers (370, 3033, 3081) located at Litton Mellonics Information Center, Canoga Park, CA.	Unclassified.	Updated quarterly.	Users are advised that EHF is not 100 percent consistent with official Navy enlisted reports. The official reports are based on EMR and EMR audit-trail files that contain some errors.	Menu-driven software is being developed to allow users to create their own extractions from EHF.

Summary of System Characteristics (Continued)

System Name/ Acronym	Purpose	Data Description	Manager/ Contacts	Research Computer	Classification	Update	Limitations/ Problems	Developmental Plans
Navy manpower planning system (NAMPS).	Provides data required to support the Planning, Programming, and Budgeting System and the Program Objective Memorandum.	Current and projected military and civilian manpower requirements and authorizations by activity rating, NOBC, NEC, skill category, and other data.	Manager: ADP Manager, CDR Al Humphreys Naval Military Personnel Command, NMPC-1642, Arlington Annex, Room 2811 Washington, DC 20370, Autovon: 224-5586, Com: (202) 694-5586 Authorizations: Mr. Bill Gerade Chief of Naval Operations (OP-122E), Arlington Annex, Room 2810 Washington, DC 20370, Autovon: 224-5307, Com: (202) 694-5307 Requirements: Mr. Kenneth Lobenstein, Chief of Naval Operations (OP-11G) Arlington Annex Washington, DC 20370, Autovon: 224-1707, Com: (202) 694-1707	Batch NAMPS resides on an IBM 3033 located at Johns Hopkins University. Interactive NAMPS resides on a Perkin Elmer 3220 located at the Navy Annex.	Files containing HARDMAN requirements are SECRET. Other files containing projections may be classified CONFIDENTIAL or SECRET.	Updated three times annually.	HARDMAN data do not include indirect support requirements. Civilian requirements are not driven by ship and aircraft inventories.	Automate the DELS subsystem to allow input data to be entered through terminals.

Summary of System Characteristics (Continued)

System Name/ Acronym	Purpose	Data Description	Manager/ Contacts	Research Computer	Classification	Update	Limitations/ Problems	Developmental Plans
Navy cost information system/five year defense program subsystem (NCIS/FYDP).	Provides reporting requirements for the Office of the Secretary of Defense.	Historical and projected ship aircraft squadron, military and civilian inventory counts and funding. Data extends from the end of FY 1962 to at least 5 years beyond the current year.	Manager: Mr. Rex Brouillard, Navy Accounting and Finance Center 64, Room 4C453, Pentagon Washington, DC 20350, Autovon: 227-0747, Com: (202) 697-0747 Additional Contact: Mr. Paul Amyot Navy Accounting and Finance Center 64, Room 4C453, Pentagon Washington, DC 20350, Autovon: 227-0747, Com: (202) 697-0747	UNIVAC 1143 located at the Navy Regional Data Automation Center.	FYDP master file is SECRET. Historical extractions are usually unclassified.	Updated four times a year.	Data users are advised that multiple records exist for a given set of accounting codes. This occurs because corrections and updates are performed by adding records with positive or negative changes.	An historical extraction of the data base and some dictionaries will be installed, for research purposes, on IBM computers located at Argonne National Laboratory.
Navy manpower requirements data base (NMRDB).	Provides comprehensive requirements data base to support planning, programming, and budgeting processes.	Military and civilian manpower requirements, by activity, rating, designator code, occupational code, pay grade, and other data. Includes current year and 2 projected years.	Mr. Larry Statham NAVMMACLANT Norfolk, VA 23511, Autovon: 690-4137, Com: (804) 444-4137	IBM computers located at the National Institute of Health.	Unclassified.	Ship and squadron requiremens are updated continuously; shore requirements, annually.	Civilian requirements are always in terms of federal employees (no contractors).	Plans exist in linking NMRDB together with other requirements/ authorization systems.

Summary of System Characteristics (Continued)

System Name/ Acronym	Purpose	Data Description	Manager/ Contacts	Research Computer	Classification	Update	Limitations/ Problems	Developmental Plans
Navy manpower requirements system (NMRS).	Generates ship, aircraft squadron, and shore requirements for military and civilian manpower.	Military and civilian requirements by activity, rating, NOBC, occupational codes, pay grade, and other data.	Managers: Mr. Dan Lowe NAVMMACLANT Norfolk, VA 23511, Autovon: 690-4137, Com: (804) 444-4137 Ships and Squadrons: Mr. Larry Statham NAVMMACLANT Norfolk, VA 23511, Autovon: 690-4137, Com: (804) 444-4137 Shore: Mr. John Simon/ Mr. Frank Almer NAVMMACLANT Norfolk, VA 23511, Autovon: 690-4137, Com: (804) 444-4137	IBM computers located at the National Institute of Health.	Unclassified.	Updated continuously.	Billets authorized are used as a proxy for shore functions that are not covered by staffing standards. Civilian requirements are always in terms of federal employees (no contractors).	Plans exist for linking the NMRS, NMRDB, and NMDAS data bases together. Claimants will be able to access data from terminals.
Enlisted survival tracking file (STF).	Provides data required by enlisted loss and strength planners (OP-135) and for analysis of cohort continuance behavior.	Biographical and service data for enlisted personnel extending from the end of FY 1977 to the present.	Manager: Mr. Ken Gay Navy Military Command, NMPC 164, Arlington Annex, Washington, DC 20370 Autovon: 224-5648, Com: (202) 694-5648 Additional Contact: Dr. Jules Borack Code 15, Navy Personnel Research and Development Center, San Diego, CA 92152, Autovon: 933-2371, Com: (619) 225-2371	IBM 3033 or 370/195 computers located at the Argonne National Laboratory.	Unclassified.	STF-B and STF-L files are updated quarterly. The minifiles are updated annually.	Files are only as accurate as the input EMR tapes and audit-trail files.	Additional variables may be added to STF-L or STF-B. An unauthorized absence/ desertion transaction file may be constructed for cross-referencing.

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